REPORT

OF THE

Commission on Pensions

OF

State Employees

MRS. O. SHEPARD BARNUM
RALPH T. FISHER
JOHN F. DALTON
J. C. WHITMAN, Vice Chairman
W. A. JOHNSTONE, Chairman

LODEMA SHURTLEFF, Secretary

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LETTER OF TRANSMITTAL

To Governor C. C. Young and

The Members of the State Legislature:

The Commission on Pensions of State Employees under the direction of chapter 431, Statutes of 1927, respectfully transmit its report covering its investigations and study.

The Commission was appointed by Governor Young early in November, 1927, and held its first meeting on the twenty-first of this month. Subsequent meetings of the Commission were held on December 19, 1927, June 21, November 13 and December 17, 1928. Public meetings for discussion of the subject with state employees and other persons interested in the matter were held before the Commission in San Francisco, February 6, 1928; Los Angeles, February 21, 1928; and Sacramento, March 9, 1928. At these meetings the whole question of a retirement system for state employees was fully discussed and a record was kept of the views and opinions expressed by state employees, state employees' associations, and other persons and organizations who attended or were represented.

In order to be assured of the possible scope of the investigation, its duties, and the general limitations of its activities, the Commission addressed two letters of inquiry to the Attorney General, which, together with the opinions received, are attached to this report as Appendix II. A copy of the enabling act is also attached as Appendix I.

The act directed that the Commission should file a report on or before July 1, 1928, but as it was impossible to complete the actuarial study and the Commission's summation of the study by that time, a preliminary report was filed with the Governor on July 1, 1928, in accordance with the advice of the Attorney General. The investigation was then continued to completion as shown in the final report herewith submitted. The preliminary report is included with, and made a part of, this report. An actuarial report on the entire investigation submitted to the Commission by Mr. Barrett N. Coates, consulting actuary of San Francisco, and approved by Professor Albert H. Mowbray of the University of California, together with a legislative bill prepared under their supervision to put the retirement plan recommended into operation, if approved by the legislature, are also attached as appendices to the report.

The preliminary report was filed by the chairman of the Commission after it had been approved by all the members of the Commission. The final report lacks the signature of Mrs. O. Shepard Barnum because of her absence in Europe at this time.

The Commission desires to express its appreciation to Mr. Coates and his assistant, Mr. W. C. Green, and to Professor Mowbray for the excellent actuarial study completed by them; to the Attorney General for his cooperation with the Commission in its work; to Miss Lodema Shurtleff, secretary of the State Civil Service Commission, who acted throughout the work of the Commission as its secretary without compensation; and to all others who assisted in the preparation of this final report.

Respectfully yours,

COMMISSION ON PENSIONS OF STATE EMPLOYEES.

W. A. Johnstone, Chairman,
J. C. Whitman, Commissioner,
Ralph T. Fisher, Commissioner,
John F. Dalton, Commissioner.

Sacramento, California,
December 31, 1928.

PRELIMINARY REPORT OF THE COMMISSION ON PENSIONS OF STATE EMPLOYEES FILED WITH GOVERNOR YOUNG ON JULY 1, 1928

June 30, 1928.

Hon. C. C. Young,
Governor of California,
State Capitol,
Sacramento, California.

Dear Governor Young:

Under the provisions of chapter 431 of the Statutes of 1927 you appointed Mr. Ralph T. Fisher, Mrs. O. Shepard Barnum, Mr. John F. Dalton, Mr. J. C. Whitman and W. A. Johnstone as the members of "a Commission on Pensions of State Employees," all of which members duly qualified and organized the Commission on November 21, 1927, with the election of W. A. Johnstone as chairman, J. C. Whitman as vice-chairman, and Lodema Shurtleff as secretary. The principal duties of the Commission are summed up in the following sentence included in section 1 of the act: "The commission shall be appointed for the purpose of inquiring into the subject of retirement pensions, allowances and annuities for state officers and employees, especially with reference to the method of establishing and maintaining the fund from which such pensions, allowances and annuities shall be paid."

Section 6 provides that "the commission shall on or before July 1, 1928, report the result of its inquiry to the governor and legislature, including such proposed legislation as it may deem advisable."

This report must be considered in the light of a progress report for the reason that the time allowed for the intricate and technical studies required is not sufficient to complete a thorough and well-digested report upon the questions before the Commission. As pointed out further on, a supplementary and more complete report will be filed at a later date.

The first decision of the Commission was that any recommendation made by it should be based upon an actuarial study of the situation in order that any plan so recommended might be regarded as actuarially sound and reliable. After a thorough examination of the actuarial field Mr. Barrett N. Coates of San Francisco, a recognized authority on such questions, with excellent experience and splendid standing in his profession, was selected as the actuary of the Commission, and Prof. A. H. Mowbray, professor of insurance with the University of California, as advisory actuary, to undertake the investigations and studies upon which a proper and sound recommendation might be based. It was the desire of the Commission to engage Prof. Mowbray on a full time basis, but his duties with the university would not permit of this. The members of the Commission feel, however, that in the selection of these two men we have the best ability and advice obtainable. The excellent manner in which these studies have been handled up to this time has thoroughly justified this opinion of the Commission.

The Commission held open meetings in the early part of this year at San Francisco, Los Angeles and Sacramento in order that all state employees' organizations or any other associations, or groups, or individuals who might be interested should have an opportunity to appear and express opinions as to the scope and application of any plan that might be submitted by the Commission. All of these meetings were well attended and many valuable suggestions were given to the Commission expressing the views of many people on this question. In general there was a surprising harmony of views and in the question of contribution it was practically unanimously agreed that it should be upon the basis of half by the employees and half by the state. At these meetings the Commission refrained from expressing any preferences or views in order that a clear and unhampered expression of opinion might be received.

A general outline of the study was first proposed. In order to have a proper understanding of its duties and the range and application of this examination, an opinion was asked of the Attorney General, which was later received and is attached to this report, marked "A." (See Appendix II.) With this in mind, a general outline of a study based upon the following divisions was carried along:

1. General nature of proposed system
2. Eligibility of employees
3. Service retirement benefits
4. Disability retirement benefits
5. Death benefits
6. Withdrawal benefits

with a general consideration of the financing of any adopted system.

The study required a great deal of technical preparation and the collection of a large mass of information relative to the status and history of all the state employees coming within the provisions of the act, somewhere around 11,000 questionnaire cards having been sent out to assemble this information. After their return, the cards were segregated and classified into various essential groups and the actuaries proceeded with the compilation of data needful in the consideration of the general questions involved in the study. These questions involved so many angles as to service and divisions of employees, retirement benefits, ages and other matters that the actuaries have been unable to complete their study or to submit complete recommendations so that a complete and well-considered report can be submitted by July 1st.

It became apparent at this time that the work of the Commission could not be completed by July 1, 1928, the time set in the act for the filing of its report. The commissioners thereupon asked a further opinion from the Attorney General as to the life of the Commission, as referred to in the act, in order that they might know whether or not further time might be given to the study and in the completion of its report.

The Attorney General rendered an opinion, dated June 18, 1928, in which he gave it as his view that the life of the Commission did not end with the date fixed for its report, but that it should continue until its work was properly completed. A copy of this opinion is also attached hereto, marked "B." (See Appendix II.)

The chairman being advised that the actuaries were in a position to submit a progress report, a meeting of the Commission was held in San Francisco on Thursday, June 21st, attended by all members of the Commission. At this time reports were heard from the actuaries, who had compiled a considerable amount of data, and they were directed more definitely in the continuation of the survey than had been possible up to this time. It was pointed out by the actuaries that with about six weeks or two months more time they will be able to submit definite conclusions covering the main questions involved. The Commission then adjourned subject to call pending the completion of the actuarial study.

It is also essential that, when the Commission has arrived at fairly definite conclusions as to what should be recommended, the matter of the financial burden involved should be discussed with the director of finance in order to receive the approval of this department upon the financial burdens which may be imposed upon the state by the adoption of any plan submitted. There is also the further question of the submission of a bill to be submitted at the next legislature which may put into effect the recommendations of the Commission.

As chairman of the Commission, I was directed, in conjunction with the actuaries, to prepare and submit to you a progress report that would comply with the requirements of the act for the filing of a report by July 1, 1928. As this is in harmony with the opinion of the Attorney General attached hereto, I believe that you will agree with the wisdom of the Commission's continuing its study upon this important matter until it is satisfied that it has thoroughly considered all of the phases of the matter before it, and that its recommendations are sound and practicable in the interests of both the state officers and employees, and the general public.

Yours respectfully,

(Signed) W. A. Johnstone,
Chairman, Commission on Pensions.

FINAL REPORT OF THE COMMISSION ON PENSIONS OF STATE EMPLOYEES TO GOVERNOR YOUNG AND THE STATE LEGISLATURE

This report supplements and completes the preliminary report filed with Governor Young on July 1, 1928.

PRELIMINARY WORK

The organization and initial work of the Commission have already been described in the earlier report. In addition to holding the public meetings mentioned in that report, the Commission has given attention to recommendations advanced by interested persons. Numerous state departments and employees, as well as other interested citizens, have availed themselves of the opportunity of expressing what they believe to be desirable features of any retirement system which might be adopted. All of these expressions have been carefully considered.

At the same time a comprehensive study has been made of the salient features of a number of present-day public retirement systems, notably those of New York state and city, Massachusetts, New Jersey, Chicago, San Francisco and Baltimore. These were of value as presenting a consensus of modern opinion on the subject, and gave a general idea of the costs that are involved. The cost of any system that might be proposed for California necessarily depends upon the number, age and length of service of eligible employees, their salary range, rates of withdrawal, etc., and the Commission found at the outset that no complete statistics were available along these lines. The procedure of securing definite information from each employee in the state service as of December 31, 1927, has already been described in the earlier report. To determine the rate of withdrawal from state service, an investigation was undertaken of all withdrawals from the service during the five-year period ending December 31, 1927, using the information on record in the office of the State Civil Service Commission.

All departments have cordially cooperated in securing the information as to present employees necessary for the work of the Commission.

REASONS FOR A RETIREMENT SYSTEM

From the standpoint of the employee, the advantages of a retirement system are obvious. If its provisions are adequate, it provides an assured income during old age or permanent disability, and gives it at minimum cost. The object of the state, as an employer, is to secure the improvement of its working personnel. An elaborate dissertation on the contribution of a retirement system toward this end is beyond the scope of this report, yet some mention should be made of some of the more important considerations.

A sound retirement system provides the state with a sure and just method of eliminating from its active force those employees who have become incapable of performing their best work because of disability or superannuation. Unless death intervenes, every worker reaches

this point at some time or other. Some may say: "Let him live on his savings, or on the charity of his children." But the discharge of a superannuated employee without adequate provision for his future needs is repugnant to every instinct of humanity, and in practice this course will not be pursued. In the absence of a retirement system, the aged or disabled employee is left in active service as long as he can "go through the motions." He is really retired on the job, but the cost to the state of paying his full salary is charged to the current salary budget, instead of to a retirement system, where it more properly belongs. To a very considerable extent, the state pays for a retirement system even though none is established.

A sound retirement system is not charity, doled out to the aged employee. It is an orderly method of providing for his retirement at the end of his normal service-life, using a capital fund which has been built up during his active service with this very eventuality in prospect. It prevents the stagnation which besets a department when the avenues of advancement are closed to the younger employees because of the continued employment of men and women far beyond their best days, but whose long service has won them the highest places within the department's command.

A sound retirement system helps to make the service of the state a "life work" for the able man or woman who is attracted toward it, yet who hesitates because it does not offer any definite prospect of financial independence in later life. The increasing complexity of state governmental and regulatory functions makes it of the utmost importance to secure and hold the best possible type of employees. The retirement system can be of marked service in stabilizing the state's employed personnel, preventing at least a portion of the losses which occur when trained, efficient employees leave the service because of superior opportunities elsewhere.

UNSOUND SYSTEM WORSE THAN NONE

An urgent responsibility rests upon the state to see that any retirement system which it may sponsor is placed upon a sound financial basis, where liabilities are provided for as they are *incurred,* rather than when they mature. The current service year must be regarded as contributing its portion to the sum total of service which will some day entitle the employee to retire, and the current year should therefore bear its share of the ultimate cost. Any system which proposes to provide funds only as they are needed to meet disbursements is inviting disaster; the unseen liabilities continue to mount, and the time will come when they will begin to mature in such volume as to cause serious embarrassment to the state, forcing it either to make staggering appropriations, or to default in its obligations to members of the system. Careful calculations have been made by the actuaries covering the annual cost of each proposed benefit, and as a further safeguard the Commission has proposed that at the end of each five-year period there be an investigation of the actual experience of the system as compared with the "expected" experience worked out by the actuaries. The determination of costs involves future salary scales, the interest rate earned on investments, mortality rate, withdrawal rate and various other elements which may change with changing conditions. By

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making these quinquennial investigations, the groundwork will be laid for any minor adjustments that may become necessary in order to assure that the system will work out as planned.

COMPULSORY MEMBERSHIP

The Commission believes that membership in the system should be compulsory for all eligible employees. To do otherwise would be to defeat the purpose of the whole program to the extent that certain employees might elect to remain outside. An employee might take the position: "I want all my salary in cash now, and I will take my chances of being able to support myself in old age or if I am disabled." But when that employee reaches the time when he should retire, or when he becomes disabled, the fact that he is outside of the retirement system will mean in practice that he will be continued in active service as long as he is able to present himself at his place of employment. Public opinion would never sustain the position that such an employee should be summarily discharged in his old age, without financial provison for his future, on account of his failure to come under the system when it was established. The state can secure full value for the money it contributes only through compulsory membership of all employees. One employee should have no more right than another to continue at full salary far beyond the period of full working efficiency. In drafting the proposed legislation, the Commission has paid particular attention to safeguarding the rights of all employees by making the service retirement provisions elastic as to age, and by a special extension of the age of compulsory retirement for present employees.

ELIGIBILITY OF EMPLOYEES

The proposed act has been drawn on the assumption that all state employees shall participate in the system, without regard to whether or not they have civil service status. Teachers and other employees in the public school system, and in the University of California are not included. Other exclusions are part-time employees, elected officers and officers appointed for fixed terms. There are certain cases where full-time employees are paid in part by the state and in part by federal or other authority, and these employees will participate on the basis of the amount of salary drawn from the state.

As will appear later, the proposed system calls for the contribution of a certain percentage of salary by the employees, and the retirement annuity purchased by these accumulated contributions is "matched" by the state. The maximum salary considered for the purposes of the system is $5,000 per year. The required contributions of an employee who may receive more than this amount will be calculated on the $5,000 maximum; if he wishes to make voluntary contributions beyond this figure, he may do so, but the state will assume no corresponding responsibility.

All new employees will enter the system after their first six months of employment; during the "probationary period" of six months they will be outside of the system, and this period will not count toward their service credit.

CONTRIBUTORY BASIS RECOMMENDED

Early in its work the Commission reached the conclusion that any proposed system should embody the "contributory" principle, under which a substantial proportion of the cost of the benefits to be derived is paid directly by employees in the form of a deduction from each salary check. The remainder of the cost of the system should be paid by the state. Under this general plan the employee contributes regularly to what is for all practical purposes a savings account which will be available for him in old age or disability, and to which the state makes very substantial payments for his benefit. It secures the active interest and cooperation of the employees and keeps the additional cost to the state within reasonable bounds. The Commission further decided that the cost as regards future service should be divided, as nearly as possible, equally between the employees and the state. Both parties expect to benefit from the retirement system and it seems reasonable that the cost of the benefits to be earned should be divided in approximately equal proportions.

SCOPE OF BENEFITS CONSIDERED

The recommendations of the Commission as to the nature and extent of benefits to be granted fall naturally into the four divisions, i. e., service retirement, disability retirement, death benefits, withdrawal benefits, recommended in the first report. In considering these four aspects of the subject, the Commission was guided by the Attorney General's opinion of December 29, 1927, which appears elsewhere in this report as a part thereof.

SERVICE RETIREMENT BENEFIT

The service retirement benefit necessarily is the fundamental feature of any system. All other benefits are relatively incidental and can be fitted to the service retirement allowance once that has been determined. The employee's prime interest is to be able to look forward to an assured income in his old age so that when he has given a lifetime of service to the state, he may be able to retire in dignity and comfort. The state as the employer desires to recognize its obligations to the people who have rendered long and faithful service, and to do it directly by means of a retirement allowance rather than by the alternative method of continuing employment far past the time of physical and mental efficiency.

Age and service are the determining factors in eligibility for service retirement. No system should be established which would encourage or permit the granting of any retirement allowance to an able-bodied person in middle life who through long experience may have just reached the peak of his value to the state. Neither will the interests of the public permit the payment of substantial retirement allowances in return for short periods of service, regardless of the age at which retirement may take place. The Commission recommends a minimum retirement age of sixty and a maximum of seventy. The maximum age would be modified for persons now in the service to the extent that none should be subject to compulsory retirement until five years after the establishment of the system, except for disability, provided there should be an absolute maximum age limit of seventy-five years for present employees. The Commission also recommends a minimum service requirement of twenty years before there may be voluntary retirement.

When an employee entering the service after the establishment of the system becomes eligible for service retirement, he will receive the following benefits:

(a) An "Annuity" of such amount as can be purchased by his own contributions to the retirement fund accumulated with interest to the date of retirement.

(b) A "Pension" of the same amount as his "annuity," to be paid for by the state.

The total of the "annuity" and "pension" is the amount of his "retirement allowance." The exact amount to be realized by any employee under these provisions depends upon the amount contributed by him to the fund during the period of his employment. The schedule of contributions appearing in the actuarial report calls for a definite percentage of salary from each employee, based on his age at entry into the system. This percentage is known as his "normal contribution" and it is the "annuity" purchased by this "normal contribution" which the state matches to produce his "retirement allowance." The amount accumulated to his credit from his own "normal contributions" depends upon the actual salary which he receives each year up to retirement. The rates of "normal contribution," however, have been so figured that if the employee has the "average" salary experience as determined by the Commission's actuaries from the pay roll records for the past five years, he will be entitled to receive a "retirement allowance" at age 65 equal to one-seventieth of his "final compensation" for each year of service. By "final compensation" is meant the average salary received during the five years previous to retirement. For example, if an employee entered the service at age 30 and retired at age 65, employing the average progression in salary throughout the period, he could retire at age 65 with a total allowance of 35/70 or one-half of the average salary he received between the ages of 60 and 65. If he elected to remain in the service beyond 65, the funds to his credit would continue to accumulate and if he retired at age 68, for example, he would receive a substantially larger allowance, because in the first place there would be more money available to purchase it, and in the second place his advanced age would mean that each dollar accumulated to his credit would buy more in the way of an "annuity" than could be purchased if he retired younger. Similarly, if he chose to retire between age 60 and 65 he would receive a considerably smaller allowance, since it would be reduced because a smaller amount would be available to his credit and because each dollar of his accumulation would purchase a smaller amount of "annuity" due to his longer expectation of life. The Commission believes that age 65 is a reasonable normal age for service retirement, but the retirement age has been made elastic, varying from 60 to 70 at the option of the employee, so that the system will fit individual needs as closely as possible.

Any member of the system has the right to make any amount of additional contributions to the funds that he pleases, and the accumulations of his additional contributions will buy him a larger "annuity" upon retirement. However, the amount of "pension" provided him by

the state would not be increased proportionately to cover his additional contributions but would be limited to such a figure as would match his accumulated "normal contributions."

OPTIONAL FORMS OF RETIREMENT ALLOWANCES

The retirement allowance will be paid monthly, and will cease at the death of the retired employee. In order to give sufficient latitude to meet the needs of individual cases, the employee may elect to take the actuarial equivalent of his regular retirement allowance in certain different forms. The first option provides that he can use his own accumulations to purchase a "cash refund annuity." He would then receive a smaller monthly payment, but if he should die before the annuity payments had equalled his total accumulations, the balance would be paid in a lump sum to his beneficiary.

The typical case covered by the second option is that of the employee whose wife is living when he retires, and who wishes to assure her an income if she should survive him. In consideration of paying him a lesser retirement allowance, the state would then agree to continue the payments as long as *either* the husband or wife survived. A variant of this situation is covered in the third option, under which the payments to the wife, after the death of the retired employee, would be reduced to one-half the original allowance. The employee may nominate any person to share in a joint allowance of this kind, provided that such person has an insurable interest in his life. These options represent no additional cost to the state or to the employee; they will always be calculated so as to be the actuarial equivalent of the regular form of allowance.

SPECIAL ALLOWANCES FOR PRIOR SERVICE OF PRESENT EMPLOYEES

The question of "prior service" is inevitably the storm center of the discussion of any proposed retirement system. The establishment of adequate retirement allowances for new employees is relatively easy because of the long period that will elapse before the allowances will be entered upon, but the present employees are distributed all along the road from youth to old age, from a few months of service to forty years' service or more. What shall be done about their "prior service?" The employees can not be expected to put up a lump sum equal to the accumulations they would have had if an adequate retirement system had been in effect during their period of employment. If the state undertakes to make the employee's prior years of service count towards his retirement allowance in exactly the same measure as his future service, will the cost be prohibitive?

Both in discussions at meetings of the Commission and at its public hearings, it was suggested that if no credit were given for "prior service" the cost of the proposed system would be correspondingly reduced. The Commission gave very careful and thorough consideration to this suggestion of recommending a system which would take care of future employees and the future service of present employees but which would make little or no allowance for "prior service." However, the more thought and study were given to the subject, the stronger became the conviction that unless "prior service" were given very substantial recognition by the state, the whole purpose of the proposed system would be defeated, and for many years the state would receive little or no benefit from the appropriations it made to take care of the future service.

The purpose of the system is to provide for the orderly retirement of older employees, and this retirement can not be brought about unless the "retirement allowance" is a substantial proportion of the active salary. It is impossible to make the normal allowance for future service high enough so that men and women of already advanced years will be willing to retire. If "prior service" is not recognized, the present generation will pass before the state will realize any substantial benefits from the money it invests in the retirement plan. In all the sound public retirement systems which have come under the Commission's observation, substantial credit is allowed for "prior service," and the entire cost of this allowance is borne directly by the state or city. After careful consideration of this entire subject, the Commission recommends that when any present employee retires at age 65 or older, and enters upon his service retirement benefit consisting of the "annuity" and the "pension" as above described, he receive in addition thereto, a special allowance for each year of "prior service" equal to one-seventieth of his average salary for the three years previous to the adoption of the system. For example, suppose an employee now age 58 entered the state service at age 30, thus having 28 years of prior service, and that his average salary for the last three years is $200 per month. Upon retirement at age 65, he would then get the "annuity" purchased by his own contribution plus a "pension" of like amount from the state and, in addition, a special "prior service" allowance of $80 per month which is 28/70 or 4/10 of his present salary of $200. If a present employee elects to retire before age 65, the amount of "prior service benefit" which he would get at age 65 will be discounted, and used to buy an allowance at his actual retirement age.

The most usual provision for "prior service" is for the state to guarantee a certain percentage, say 1/70, of *final salary* for each year of "prior service." This means that the special allowance to be received by the present employees is based on the salary which they will be receiving just before they are retired. In the opinion of the Commission, the plan proposed under which the "prior service" allowance would be based upon the present salaries of the employees has two distinct advantages. First, it takes away the uncertainty of guaranteeing an allowance based on an unknown future salary. Second, since salaries tend to increase with length of service, the plan proposed will be less costly to the state than one which based the allowance on final salary. Where compulsory retirement of any present employee takes place by reason of the age limit, or where he voluntarily retires after age 70, and where the total retirement allowance, including credits for "prior service," works out at less than $40 per month, it is recommended that a minimum allowance of $40 per month be paid, or 50 per cent of final salary, whichever is the smaller.

DISABILITY RETIREMENT BENEFIT

Second only in importance to the "service benefit" is the "disability retirement benefit." This takes care of cases where an employee

becomes totally disabled either by sickness or accident so that he is unable to perform his duties. It is the Commission's belief that no retirement system should be adopted unless it contains some form of disability allowances.

It is proposed that this benefit shall be paid without regard to whether the disability is directly traceable to the employment. Under the State Workmen's Compensation and Safety Act certain definite benefits are provided where disability results from an occupational accident. In such a case the benefits now suggested by the Commission would be paid in addition to anything the employee might receive under the compensation act. If disability occurred as a result of sickness or accident in no way connected with the employee's occupation, the Workmen's Compensation Act would not apply, but the employee would receive the disability benefit under the retirement system.

Ten years of service has been set up as the minimum period before any employee will be eligible for a disability retirement allowance. When an employee, with more than ten years' service, becomes physically or mentally incapacitated for the performance of duty, he will recive an "annuity" purchased by his own accumulations. The state would then add to this "annuity" a "disability pension" of such an amount as will bring the total disability retirement allowance to 90 per cent of 1/70 of his final salary for each year of service. "Final salary" is defined as the average salary for the last five years. For example, if an employee with 20 years of service became disabled and had been receiving an average salary of $200 per month for the preceding five years, he would be entitled to receive a total disability allowance of $51.43 per month, which is 90 per cent of 20/70 of $200 per month. If this rule works out so that the disability allowance is less than 25 per cent of the salary, then the amount would be recalculated and the employee would receive 90 per cent of 1/70 of his final salary for each year of possible service up to age 65, provided that this amount did not exceed 25 per cent of his salary. In fairness to the active employee the disability retirement allowance must always be somewhat less than the service retirement benefit. It will not be permitted to exceed 90 per cent of the service retirement allowance which the employee could draw assuming that he retired at his lowest possible retirement age. In any event the accumulations to the credit of the employee will be used as far as they will go in providing his disability retirement allowance.

It is essential that "disability retirement" be made only after examination by a physician appointed by the administrative authority of the system, and that the allowance be cancelled if the employee does not continue to be incapacitated.

DEATH BENEFIT

Some form of death benefit is a feature of most retirement systems. Perhaps the most common type is the payment of a fraction, usually one-half, of the current year's salary. It is usually limited to include only those deaths which occur before the employee has retired, and nothing is paid upon the death of a retired employee, unless he has elected some special option upon retirement. Admittedly, the prime purpose of a retirement system is to take care of faithful employees who become incapacitated either on account of age or of physical or mental disability, and it is not directly concerned with the provision of life insurance for an employee's dependents. The Commission has therefore concluded, in the interests of economy, that the death benefit, if any, should be merely a nominal amount, sufficient to defray the normal cost of the funeral and last illness.

It must not be overlooked that the contribution standing to the credit of employees, accumulated by deductions from the pay roll, will mount up rapidly, and in a very few years all employees will have several hundred dollars saved in this way. These accumulations would be paid to the beneficiary of the employee in case he dies before service or disability retirement, and will in themselves be assurance of a substantial average sum for the benefit of the family. The recommendation finally agreed upon by the Commission is that the employee's contributions, with interest to the date of death, be paid to his representative or beneficiary upon death before retirement, and that if the amount is less than $500, the state add to it sufficient to bring it up to this minimum figure.

WITHDRAWAL BENEFIT

When an employee quits the service of the state for any reason except by disability or service retirement, he will receive in one sum his own contributions to the retirement system, plus interest accumulations. Any contributions which the state has made on his behalf, looking to possible future service or disability retirement, shall remain the property of the state and a part of the retirement fund.

COST OF PROPOSED SYSTEM—CONTRIBUTIONS BY EMPLOYEES

The rates of contribution by employees are expressed in percentages of salary. The employee will have a pay roll deduction from his salary each pay day, and the percentage will be determined by his age, nearest birthday, when he enters the retirement system. The percentage will remain the same from that time on; if his salary increases or decreases, the actual amount held out of his salary check will vary accordingly; but the percentage will be unchanged. The actuaries have figured the rates on the assumption that 4 per cent interest will be allowed; on the basis of the salary scale as constructed from the state's experience, these rates will produce a retirement allowance of 1/70 of "final salary" for each year of service, to be entered upon at age 65, one-half of which allowance will be purchased by these accumulated contributions, and the other half will be furnished by the state. It must always be kept in mind that the state does not guarantee 1/70 of salary for each year served; the exact amount will be determined by the funds to the employee's credit when he is ready to retire, and this fund will be governed by his personal salary experience during his active service.

In the interest of simplicity, the Commission urged the actuaries to make as few distinctions as possible between employees of the same age. Some systems provide different rates of contributions for different occupations, such as clerks, mechanics, laborers, etc., due to anticipated differences in salary scale and in the age when retirement will be desired. Calculations showed these differences, in the light of California's experience, to be so small that they could be ignored, and the actuaries were able to reduce contribution rates to two sets, one for male employees, and the other for female employees.

It is a well-established fact that women who have the advantage of an annuity, or pension, live materially longer than men in the same situation. If the amount of retirement allowance is to be equal for men and women of equal service and salary, as seems essentially desirable, it is therefore necessary that the contributions made by the women be slightly higher.

The rates of contribution by employees as determined by the actuaries are shown in detail in the actuarial report. The average contribution for all employees will be about 4.09 per cent of salary.

COST TO THE STATE

As has already been stated, statistics assembled by the Commission as of December 31, 1927, showed 7553 eligible employees, with a total annual salary roll of $13,284,459. All cost figures have been furnished by the actuaries as of that date, and are given in detail in their report. For the sake of brevity, the discussion here deals only with the total cost of each benefit for all groups of employees.

The annual estimated cost to the state of providing the service retirement benefit applicable to future service is 2.44 per cent of the pay roll, or $323,997 for the first year. The actuaries' calculations show that this percentage contributed by the state each year should produce sufficient accumulations to "match" the retirement benefits produced by the contributions of the employees. It is a considerably smaller percentage than the average which will be paid by the employee, which follows naturally from the fact that whenever an employee quits the service his own contributions are returned to him in full, whereas the contributions made by the state are not paid over. The figure of $323,997 represents 2.44 per cent applied to the 1927 eligible pay roll; as the state service grows, the same percentage should be applied to the eligible pay rolls as they develop.

Similarly, the annual estimated cost to the state of providing the disability retirement benefit is 0.64 per cent, or $85,318 for the first year. As has already been explained, it is proposed that the employee's contributions will be applied toward his disability allowance, and the expected amount to be received from this source has been allowed for in the determination of the figure as quoted. This should also be considered as a percentage applying with equal force to the future eligible pay roll.

The cost of the proposed death benefit presents a different type of problem. The service and disability retirement features, exclusive of the liability for past service, can readily be expressed as a percentage to be applied to future pay rolls. The state's obligation when an employee dies will merely be the amount by which that employee's own contributions, with interest, falls short of $500. By far the heaviest cost to the state will be in the early years of the system. As the employees' contributions begin to pile up, the cost to the state will be very small. If all the present employees already had to their credit the amounts they would have accumulated had they been contributing to the system from the beginning of their service, the present annual cost of the proposed death benefit would be but $16,746 (approximately), or 0.13 per cent of the pay roll. It is recommended that the state meet the death benefit cost on a "pay-as-you-go" basis, contributing each year the actual amount required by the deaths which occur. On this basis, the estimated cost for one year on the pay roll as of December 31, 1927, is $46,235.

Thus far, the financial provision necessary by the state is 3.08 per cent of the eligible pay roll, (2.44 per cent for the service retirement feature, plus 0.64 per cent for the disability retirement), and an estimate of $46,235 for deaths in the first year. It is recommended also that the state provide for the total expenses of administration of the system. It is scarcely practicable to charge any portion of this item directly against the employees.

The "accrued liability" as regards present employees comes from two sources. In the main, it comes from the proposal that the state pay to each present employee, upon retirement at age 65, a special allowance equal to 1/70 of this present salary for each year of service before the establishment of the system (his "present" salary being taken as the average amount for the past three years). To this must be added the additional cost necessary to guarantee each present employee an allowance upon compulsory retirement of not less than $40 per month. The Commission recommends that with the acceptance of responsibility for these items by the state there should also be adopted a definite plan for funding the amounts over a proper period of years. The total "accrued liability" for prior service, expressed in one sum, is $3,226,382. It is recommended that this should be taken care of by a sinking fund payment of $228,200 for a period of twenty years. This is 1.72 per cent of the eligible pay roll at the end of 1927. As the numbers in the state service increase, this sinking fund payment for prior service will remain the same, and will therefore represent a decreasing percentage of the annual pay roll in years to come.

At first glance, the cost of the special provision under which no present employee would be subject to compulsory retirement except with a minimum retirement allowance of $40 per month hardly seems to fall among the "accrued liabilities." But it is an obligation which concerns only present employees, and will not be incurred for employees entering the state service in the future. It should therefore be expressed as a lump sum, and then funded over a period of years, since its expression as a percentage of future pay rolls would result in increasing contributions by the state, which are not necessary. The liability for this "minimum allowance," expressed in one sum, is $281,140. Practically all of this is for present employees very close to the age of compulsory retirement, who are either getting particularly low salaries, or have had but a short period of service. It must therefore be taken care of within a few years, and the Commission recommends the establishment of a sinking fund of $60,723 over a five-year period.

Assembling the cost figures as already given, we have the following:

Estimated Cost to State for First Year of System

	Amount	Per cent of 1927 salaries
Service retirement benefit (current service only)	$323,997 00	2.44%
Disability retirement benefit	85,318 00	0.64%
		3.08%
Death benefit (current cost bases)	46,235 00	0.35%
Sinking fund for prior service (20-year period)	228,200 00	1.72%
Sinking fund for minimum allowance (5-year period)	60,723 00	0.46%
Total	$744,473 00	5.61%

Exclusive of the relatively small item of the expense of administration, the total estimated cost for the first year of the system is $744,473. A truer perspective is obtained by considering this as an addition of 5.61 per cent to the pay roll. As is shown in the summary just given, the cost for service and disability retirement as applied to future service is 3.08 per cent of salaries, to which should be added 0.13 per cent as the estimated "ultimate" cost of the death benefit, after the system has reached a normal condition, giving a total cost of 3.21 per cent exclusive of the extra load incidental to the establishment of the system. Private business is moving rapidly in the direction of retirement annuities for faithful employees, with a sharing of the cost between employer and employee. The advantages of such a system in the public service, where the financial incentive is normally less, are greater than in a private corporation, and it should prove of real assistance to the state in its competition with private business to secure and hold the best type of employees to handle the increasing size and complexity of its business.

A large part of the Commission's efforts have been spent in endeavoring to devise a system which would produce satisfactory results in the way of retirement allowances, and yet to hold the cost to the state, and to the employee, down to the minimum. The normal age for retirement was placed at 65, instead of a few years earlier as is often found, because of the effect that this would have on the cost. Originally the Commission hoped to make the "normal" retirement allowance 1/60 of the final salary for each year of service, but preliminary estimates of cost led to the substitution of 1/70 as the normal fraction. It is felt that these adjustments, and others of similar effect, have not impaired the adequacy of the system to solve the retirement problem, but have placed it on a basis which the Commission can definitely recommend as a sound and conservative investment for the State of California.

In considering whether or not a retirement system should be established for state employees, the financial outlay required by the state merits and requires careful consideration. Yet the advantages to the state must be kept equally in mind. Costs are tangible; benefits are intangible, but none the less real. F. Spencer Baldwin, in a discussion of a proposed contributory retirement plan for Massachusetts, appearing in the Annals of the American Academy of Political and Social Science, has said: "It is reasonably certain that a system such as is proposed would, in the long run, save money for the taxpayers. Such saving would be effected in three ways: First, through elimination of the direct waste of money paid to aged employees who have outlived their usefulness; second, through stoppage of the indirect loss entailed by the slow pace forced upon the rest of the workers by the presence of inefficient veterans; third, through the positive gain that would result from the substitution of younger men for the superannuated employees, from the increased efficiency promoted by the retirement system and possibly from the attraction of a higher grade of men into the municipal service." It is the belief of the Commission that the establishment of a sound retirement system for state employees, such as is described in this report, would prove to be a wise and timely investment for the people of California.

ADMINISTRATION OF THE SYSTEM

It is recommended by the Commission that the retirement system be administered by a board of administration to consist of three members; namely, the president of the State Civil Service Commission, the Director of Finance and one other person to be appointed by the Governor. The members of the board will serve without pay, and may appoint a secretary as the executive officer for the board and such other employees as may be necessary. This recommendation is included in the proposed legislation.

At the public hearings it was the unanimous opinion expressed by the state employees present that the interests of the employees could best be represented upon a board of administration by the president of the State Civil Service Commission. The financial obligations involved make the selection of the Director of Finance as obviously essential. The third member is left to the judgment of the Governor.

Respectfully submitted.

COMMISSION ON PENSIONS OF STATE EMPLOYEES,

W. A. JOHNSTONE, Chairman,
J. C. WHITMAN, Commissioner,
RALPH T. FISHER, Commissioner,
JOHN F. DALTON, Commissioner.

Sacramento, California,
December 31, 1928.

APPENDIX I

COPY OF ENABLING ACT

(Statutes of 1927)

CHAPTER 431

An act providing for a commission on pensions of state employees; providing for the appointment of members thereof; prescribing the powers and duties of such commission, and making an appropriation therefor.

[Approved by the Governor May 10, 1927.]

The people of the State of California do enact as follows:

SECTION 1. A commission is hereby created consisting of five members as follows: One shall be the commissioner of the state department of civil service, ex officio; four members to be appointed by the governor. The commission shall be appointed for the purpose of inquiring into the subject of retirement pensions, allowances and annuities for state officers and employees, especially with reference to the method of establishing and maintaining the fund from which such pensions, allowances and annuities shall be paid. A vacancy occurring in the office of a member of such commission shall be filled by the officer who made the original appointment.

SEC. 2. A member of the commission shall not be disqualified from holding any other office, state or municipal, nor forfeit the same by reason of his appointment under this act, notwithstanding the provisions of any city charter.

SEC. 3. Such commission shall have power to subpena and compel the attendance of witnesses, including public officers and employees, and to require the production of books, records and papers, to take and hear proofs and testimony and adopt rules for the conduct of its proceedings.

SEC. 4. The commission shall select a chairman and vice-chairman from among its own members and may employ a secretary and such other experts and employees as may be needed, in connection with the duties of the commission, and may fix their compensation, in accordance with the provisions of the civil service act. It shall be the duty of all persons subject to the authority of the state in that behalf to aid in all proper ways in carrying into effect the provisions of this act.

SEC. 5. The members of such commission shall receive no compensation for their services, but shall be paid their actual and necessary traveling, hotel and other expenses incurred in the discharge of their duties.

SEC. 6. The commission shall on or before July 1, 1928, report the result of its inquiry to the governor and Legislature, including such proposed legislation as it may deem advisable.

SEC. 7. The sum of six thousand dollars ($6,000) or so much thereof as may be needed is hereby appropriated for the purpose of this act, payable by the treasurer on the warrant of the controller on the order of the chairman or vice chairman of such commission.

SEC. 8. The commission shall have the power to receive all voluntary gifts, or contributions, that may be made for carrying out the provisions of this act and upon the termination of the life of said commission, any surplus funds shall be paid to and become a part of, the reserve fund created by virtue of any pension law enacted as a result of this investigation.

APPENDIX II

OPINIONS FROM THE ATTORNEY GENERAL

November 23, 1927.

HON. U. S. WEBB,
Attorney General,
State Building,
San Francisco, California.

Dear Sir: At the initial meeting of the State Pension Commission held on November 21st several questions arose as to the scope of the study to be undertaken and recommendations that may be made under the act creating the Commission. (Chapter 431, Statutes of 1927.)

It was agreed that the extent of service which might well be included in a pension study is the following:

a. Retirement pensions.

b. Death benefits.

c. Disability allowances.

The title of the act indicates that pensions alone might be considered, but the word "allowances" might indicate that death benefits and disability allowances may be included in a liberal construction of this word. We would like to have your opinion as to what limitations must govern our action in formulating a report in this regard; that is: may we, under the term "allowances," include a report on death benefits and disability allowances for officers and employees?

The act states that these benefits are to be considered for "state officers and employees." The members of the Commission are in doubt as to the meaning of this term and desire to know who are comprehended in the expression "state officers and employees," as well as to know what the line of demarcation between officers and employees is.

Further, would teachers and employees under our system of public schools come under the designation of "state officers and employees" as those words are used in the act? We have in mind that there are various employees of the public schools, such as janitors, who would not come within the purview of the Teachers Retirement Salary Act; and also, that there are teachers in the state correctional schools and various state institutions, such as the Deaf and Blind Schools at Berkeley, who are not included in the Teachers Retirement Salary Act.

We thank you in advance for your assistance in giving us information on these questions.

Yours very truly,

(Signed) W. A. JOHNSTONE,
Chairman, Commission on Pensions of State Employees.

December 29, 1927.

W. A. JOHNSTONE, *Chairman,*
Commission on Pensions of State Employees,
State Civil Service Commission,
Sacramento, California.

DEAR SIR: We are in receipt of your communication referring to chapter 431 of the Statutes of California of 1927 (Statutes 1927, page 714).

This act provides for a commission on pensions for state employees. The title of the act is as follows:

> "An act providing for a commission on pensions of state employees; providing for the appointment of members thereof; prescribing the powers and duties of such commission, and making an appropriation therefor."

In section 1 of the act it is provided that:

> "The commission shall be appointed for the purpose of inquiring into the subject of retirement pensions, allowances and annuities for state officers and employees, especially with reference to the method of establishing and maintaining the fund from which such pensions, allowances and annuities shall be paid."

You first refer to the title of the act indicating that the only thing provided for in the way of relief for state employees is the proposed granting of "*pensions* for state employees." You also refer to the fact that in the body of the act the commission is authorized to inquire "into the subject of retirement pensions, *allowances* and *annuities* for state officers and employees."

You state that at the initial meeting of this commission so created by the act it was agreed that the extent of service which might well be included in a pension study is the following:

(a) Retirement pensions.

(b) Death benefits.

(c) Disability allowances.

You ask for our opinion as to what limitations must govern your action in formulating a report in this regard, that is, whether your commission under the term "allowances" found in the body of the act might include a report on death benefits and disability allowances for officers and employees as well as a report on retirement pensions.

The act merely creates a commission to make a study and report back to the legislature proposed legislation. Such legislation as so proposed may or may not be finally adopted by the legislature. Until so adopted it would have no force and effect. It would therefore appear that your commission might in its discretion exercise the power to recommend any proposed legislation which tends to carry out the spirit and purpose of the act, which is to encourage faithful performance on the part of state employees and guarantee to them assurances against old age or disability, as well as assurance in favor of their families in the event of their death, if in your judgment this would lead to the fulfillment of the end desired.

You further call attention to the fact that the title of the act refers to "state employees" while the body of the act refers to "state officers and employees." You ask who are comprehended within the expression "state officers and employees." I am of the opinion that this expression refers to any officer or employees of the state who is actually employed by the state and paid by the state. I do not think it necessary to go into the question as to the line of demarcation between "officers" and "employees."

Further, you inquire whether teachers and employees under our system of public schools come under the designation of "state officers and employees." Such employees are in fact employees of the different school districts of the state and their salaries are not paid in full by the state. I therefore would not consider them as being state employees as contemplated by this act.

You further refer to teachers of certain state correctional schools and various state institutions who are not included in the Teachers' Retirement Salary Act. Any such institution for which the state provides support and whose employees would receive their compensation wholly from the state are in my judgment included within the scope of this act.

Very truly yours,

U. S. WEBB, Attorney General.
(Signed) By Frank English,
Deputy.

June 6, 1928.

HON. U. S. WEBB,
Attorney General,
State Building,
San Francisco, California.

DEAR GENERAL: We are in considerable doubt as to the meaning of chapter 431, Statutes of 1927, "An act providing for a commission on pensions of state employees; providing for the appointment of members thereof; prescribing the powers and duties of such commission, and making an appropriation therefor."

We have already asked one opinion from you as to the scope and application of this act, and considerable progress has been made in the assemblage of a large mass of data which is now in the hands of Mr. Barrett N. Coates and Professor A. H. Mowbray of the University of California, who are acting as our actuaries.

Section 6 provides that "the commission shall on or before July 1, 1928, report the result of its inquiry to the Governor and legislature, including such proposed legislation as it may deem advisable."

Section 8 provides that the commission shall have the power to receive all voluntary gifts or contributions and "upon the termination of the life of said commission, any surplus funds shall be paid to and become a part of, the reserve fund created by virtue of any pension law enacted as a result of this investigation."

The act itself does not definitely fix the life of the commission. On the reading of section 6 it might be inferred that its life ended on July 1, 1928, except for the fact that it must report to the legislature. I am in doubt as to how the commission can report to a legislature that is not yet created, and I am not sure whether this language might mean the legislature which possibly still exists.

Section 8 calls for the payment to "the reserve fund created by virtue of any pension law enacted as a result of this investigation." Just how this commission, if its life ends on July 1, 1928, can obey this instruction to pay any residue of its funds to a reserve fund that in the very nature of things can not be created for more than a year, I do not know. I have discussed this question to some extent with Mr. Christiansen here in Sacramento and on his suggestion I am submitting it to you. He is of the opinion, and I agree with him, that so far as the report is concerned there can be no great difference as to whether or not it is finally completed on July 1st. There is a strong probability that the commission and its actuaries shall not be able to come to a well-digested conclusion within this time.

The actuaries are now working upon the analysis of some twelve or thirteen thousand questionnaire cards covering the entire state employment roster affected by this survey. They advise me that they hope to have this analysis in such form as to be in shape for the consideration of the members of the commission in deciding to what extent such a system may be applied. Necessarily this involves a very careful consideration of the financial obligations, and I am asking Mr. A. R. Heron, Director of Finance, to sit with the commission to advise it on these questions. Mr. Coates at the present time is in St. Louis making an investigation of an insurance company for the Insurance Commissioner of California. The earliest date, so I am advised by his office, that we can expect him back here is on June 18th. One member of the commission, Mrs. O. Shepard Barnum of Alhambra, whose husband, Dr. Barnum, died recently, expects to sail for Europe and is very anxious to have the matter completed by this time in order that she may leave. I think it will be extremely difficult for the commissioners to properly digest the facts submitted by the actuaries and come to a well-balanced conclusion within the two weeks of this month remaining after the 18th.

There will remain, then, the question of travel expenses for the commissioners, the mechanical work of making up the report, the preparation of the proposed legislation if any is agreed upon, and other matters of this sort involving a certain amount of money outlay. The Civil Service Commission has no money that can be used indirectly to do this work as we are running on a very short margin. Whether or not the Department of Finance could find additional money legally, I have some doubt. Whatever outlay may be called for would be of no great moment, but the legality of the outlay, of course, will be properly questioned by the Controller's office without some opinion from your office.

According to the general terms of the act, which is very indefinite, about any conclusion may be drawn. It may be that the author of the measure had in mind that the commission should appear before the legislature on behalf of any recommendations submitted. The act provides only for travel expenses.

If it is not too much trouble, I would be glad if you will give me your views as to what the life of the Pension Commission may be under the very vague terms of the act.

Yours very truly,

(Signed) W. A. JOHNSTONE,
Chairman, Commission on Pensions.

San Francisco, June 18, 1928.

HON. W. A. JOHNSTONE,
Chairman, Commission on Pensions,
Forum Building,
Sacramento, California.

DEAR SIR: I have before me your communication of recent date in which you state that you are in doubt as to the meaning of the act of the legislature of 1925 entitled, "An act providing for a commission on pensions of state employees," etc.

You call attention to the fact that section 6 provides that the commission shall on or before July 1, 1928, report the result of its inquiry to the Governor and the legislature including such proposed legislation as it may deem advisable.

You also call attention to section 8, which provides that the commission shall have the power to receive all voluntary gifts or contributions and that upon the termination of the life of the commission any surplus funds shall be paid to and become a part of the reserve fund created by virtue of any pension law enacted as the result of the efforts of the commission. You state that you are principally concerned in determining from the statute just what the length of life of the commission is, and you state that the act does not definitely fix the life of the commission.

You state that you are in doubt as to how the commission can report to a legislature that is not yet created and that you are not sure whether this language might mean the legislature which possibly still exists. While this is not the main question you submit to this office, I see no difficulty in interpreting the statute in this regard. The fact that the present legislature adjourned its session in 1927 does not imply that there is not at the present time an existing legislature. The legislature of 1927 functions until its successors take office in 1929. The duties of the legislature do not consist only in attending the legislative sessions at Sacramento, but a great deal of work is carried on through the committees appointed at its sessions. Therefore, if your report were ready on July first it should be made to the Governor and the present legislature, which is still in existence although not at the present time in session. Your doubt in this connection seems to have arisen from the fact that you questioned whether or not the legislature of 1927 still existed and with that doubt removed you undoubtedly will have no further difficulty upon that phase of the matter.

The specific question that you submit for the views of this office is the duration of the life of the commission. In this connection it is true that the statute does not specifically create the commission for any specific term. It does, however, create a commission for the purpose of inquiring into the subject of retiring pensions, etc., and for the purpose of proposing such legislation as it may deem advisable. The statute does provide that the commission shall report the result of its inquiry to the Governor and the legislature on or before July 1, 1928. While the language purports to be mandatory, in my opinion the statute must be given a liberal interpretation to effectuate the purposes for which it was enacted, and to give an interpretation to the statute which would defeat these purposes would not only be unreasonable but would be contrary to the spirit and the intent of the act. I therefore am of the opinion that this language is directory and not mandatory. The obvious purpose of the section was to fix some definite date about which time the report should be rendered in order that the members of the legislature and the Governor could have the benefit of the views of the commission in ample time to consider the proposed legislation before the next session of the legislature.

I, therefore, am further of the opinion that the commission should, if possible, endeavor to have this report on file with the Governor and the legislature on that date if it can conveniently be done. There is, however, in the statute no penalty attached to the failure to have the report filed on the particular date mentioned, nor could it reasonably be said if the report was not filed on that day that the life of the commission expired and its powers ceased because any such interpretation would not only defeat the purposes of the statute but would, in my opinion, be an absurdity.

I believe that the life of the commission ceases when its labors have been fully performed. The commission is appointed to inquire into the subject of retirement pensions, etc. and to report to the legislature, and when the commission has completed its investigations and made its report to the legislature its duties have then been fully performed and its functions cease. In my opinion this is the only reasonable conclusion which can be drawn from the statute.

Very truly yours,

(Signed) U. S. Webb, Attorney General.
By Charles A. Wetmore, Jr.,
Deputy.

APPENDIX III.

PROPOSED LEGISLATION TO PUT RETIREMENT PLAN INTO EFFECT

An act to establish a retirement system to provide for the retirement of employees of the State of California.

The People of the State of California do enact as follows:

Section 1. The purpose of this act is to provide a means whereby public employees who become superannuated or incapacitated as a result of age or disability may be replaced by more capable employees, thus effecting economy and efficiency in the public service without prejudice and without inflicting a hardship upon the employees removed, and at the same time to compensate such superannuated employees and those who may die or become incapacitated by making provision for their retirement and for the payment of death benefits.

Sec. 2. The following words and phrases as used in this act, unless a different meaning is plainly required by context, shall have the following meanings:

(*a*) "Retirement system" shall mean "state employees' retirement system" provided for in section 3 of this act.

(*b*) "Employee" shall mean any person in the employ of the State of California whose compensation is paid wholly out of funds contributed by the state.

(*c*) "Member" shall mean any person included in the membership of the retirement system as provided in section 4 of this act.

(*d*) "State" shall mean "State of California."

(*e*) "Board" shall mean "board of administration" as created in this act.

(*f*) "Retirement fund" shall mean "state employees' retirement fund" as created and established in section 5 of this act.

(*g*) "State service" shall mean service rendered as an employee of the state for compensation, and, for the purposes of this act a member shall be considered as being in the "state service" only while he is receiving compensation from the state for such service.

(*h*) "Prior service" shall mean the state service of a member rendered before the first day of__________________________, certified on a prior service certificate and allowable as provided in section 7 of this act.

(*i*) "Continuous service" as applied to "prior service" shall mean all prior service, regardless of interruptions in such service and as applied to service as a member shall mean uninterrupted employment by the state, except that discontinuance of state service of a member from any cause whatever followed by reentrance into the state service within one year from the date of such discontinuance shall not count as a break in the continuity of service.

(*j*) "Beneficiary" shall mean any person in receipt of a pension, annuity, a retirement allowance, a death benefit or any other benefit provided in this act.

(*k*) "Compensation" shall mean the remuneration payable in cash out of funds contributed by the state plus the monetary value, as determined by the board of administration, of board, lodging, fuel, laundry and other advantages allowed as remuneration by the state.

(*l*) "Compensation earnable" by a member shall mean the average compensation as determined by the board of administration upon the basis of the average period of employment of members in the same group or class of employment and at the same rate of pay, but such "compensation earnable" shall not exceed $416.66 per month.

(*m*) "Final compensation" shall mean the average annual compensation earnable by a member during the five years immediately preceding his retirement.

(*n*) "Regular interest" shall mean interest at four per centum per annum, compounded annually, plus such additional interest as the board of administration may declare from year to year in accordance with the provisions of this act.

(*o*) "Normal contributions" shall mean contributions at the rates provided for in subdivision (*a*), section 10 of this act.

(*p*) "Additional contributions" shall mean contributions at the rates provided for in subdivision (*d*), section 10 of this act.

(*q*) "Accumulated normal contributions" shall mean the sum of all the normal contributions, deducted from the compensation of a member, standing to the credit of his individual account, together with the regular interest thereon.

(*r*) "Accumulated additional contributions" shall mean the sum of all the additional contributions, deducted from the compensation of a member, standing to the credit of his individual account, together with regular interest thereon.

(*s*) "Accumulated contributions" shall mean accumulated normal contributions plus accumulated additional contributions.

(*t*) "Pension" shall mean payments for life derived from contributions made by the state as provided in this act.

(*u*) "Annuity" shall mean payments for life derived from contributions made by a member as provided in this act.

(*v*) "Retirement allowance" shall mean the pension plus the annuity.

(*w*) "Fiscal year" shall mean any year commencing with July first and ending with June thirtieth next following.

SEC. 3. A retirement system is hereby created and established to become effective ------------------, and to be known as the "State employees' retirement system."

SEC. 4. (*a*) With the exception of those employees who are excluded from membership as provided in subdivision (*b*) of this section, all employees shall become members of the retirement system as follows:

(1) Every employee in state service on the date when this act becomes effective, shall become a member of the retirement system on that date, provided he has rendered at least one-half year's continuous service, otherwise on the date when he shall have completed one-half year's continuous service.

(2) Every employee who shall reenter state service after the date when this act becomes effective, and who, prior to such reentry, shall have completed six months of continuous state service, shall become a member of the retirement system upon such reentry.

(3) Every other employee who shall enter state service after the date when this act becomes effective, shall become a member of the retirement system upon the completion of six months of continuous service.

(*b*) The following employees shall not becomes members of the retirement system:

(1) Elective officers.

(2) Inmates of state institutions who are allowed compensation for such service as they are able to perform.

(3) Persons in state institutions principally for the purpose of training, but who receive compensation.

(4) Persons employed under contract for a definite period and for the performance of specific duties requiring professional or high technical skill.

(5) Employees serving on a part-time basis.

(6) Persons in state service on----------------------whose compensation equals or exceeds $416.66 per month, and who file with the board of administration an affirmative election not to become members.

(*c*) It shall be the duty of the head of each office or department to give immediate notice in writing to the board of administration of the change in status of any member in his office or department resulting from transfer, promotion, leave of absence, resignation, reinstatement, dismissal or death. The head of each office or department shall furnish such other information concerning any member as the board may require.

(*d*) Each member shall be subject to all the provisions of this act and to all the rules and regulations adopted by the board of administration. Should the state service of any member, in any period of ten consecutive years, amount to less than five years, or should he withdraw more than one-quarter of his accumulated normal contributions, or should he die or be retired, he shall thereupon cease to be a member.

SEC. 5. A fund is hereby created and established to be known as the state employees' retirement fund and shall consist of all the moneys paid into it in accordance with the provisions of this act, whether such moneys shall take the form of cash, securities or other assets.

SEC. 6. A board of administration of said retirement system is hereby created, consisting of the president of the civil service commission, the director of finance and one other person to be appointed by the governor. The president of the civil service commission shall be chairman of the board.

The board may establish such rules and regulations as they deem proper and may appoint and fix the compensation of a secretary and such other employees as may be necessary. It shall maintain its office in the city of Sacramento, and the legislature shall appropriate funds necessary to pay all expenses of administration of the act. The members of the board shall serve without compensation, but they shall be reimbursed out of the funds appropriated in this section to defray the cost of operating the retirement system for any expense which they may have incurred through service on the board.

The board shall be the sole authority and judge under this act and acts in amendment hereof as to the conditions under which persons may be admitted to benefits under the system and shall have exclusive control of the administration and investment of the fund except as hereinafter expressly provided. As soon as practicable after the close of each fiscal year it shall file with the governor a report of its work for such fiscal year.

SEC. 7. Subject to the following and to all other provisions of this act, including such rules and regulations as the board of administration may adopt in pursuance thereof, the said board shall determine and may modify allowances for service and disability.

It shall fix and determine how much service rendered in any fiscal year shall be the equivalent of a year of service and of parts thereof, but shall credit one year for two hundred and fifty or more days of service rendered by employees on a per diem basis and one year for ten months or more of service rendered by employees on a monthly basis, but not more than one year for all service in any fiscal year.

Time during which a member was absent from service without pay shall not be allowed in computing service.

Each employee shall file with the board of administration such information affecting his status as a member of the retirement system as the board may require.

The board of administration shall issue a prior service certificate to each member entering the retirement system on______________, and to each member entering the retirement system after that date if such entry is within one year after rendering state service prior to __________, and shall certify thereon service rendered prior to__________ __________; excluding therefrom the first half-year of service rendered. Service certified on a prior service certificate shall be the basis for a retirement allowance or benefit as provided in this act only if membership continues until retirement on a retirement allowance or until the granting of such other benefit. Such certificate shall become void and not renewable if membership is discontinued except by retirement on a retirement allowance.

SEC. 8. The management and control of the retirement system shall be vested in the board of administration as provided in section 6 of this act. The board shall exercise the powers and perform the duties conferred on it by said section, and in addition thereto

(*a*) Immediately after the establishment of the retirement system the board shall make actuarial investigation of the mortality, service, compensation and experience of the members and beneficiaries of the system as herein defined, and adopt such tables and such rates as are required in paragraph 1 of this subsection. The board shall keep in convenient form such data as shall be necessary for the actuarial valuation of the retirement fund created by this act. In the five-year period beginning with the time that this retirement system becomes operative

and in every five-year period thereafter, the board shall cause to be made an actuarial investigation into the mortality, service and compensation experience of the members and beneficiaries as defined by this act, and shall further cause to be made an actuarial valuation of the assets and liabilities of the retirement fund created in this act, and upon the basis of such investigation and valuation shall

(1) Adopt for the retirement system such interest rate and such mortality, salary service and other tables as shall be deemed necessary;

(2) Revise or change the rates of contribution by members on the basis of such mortality, service and other tables.

(*b*) Contributions of members, or beneficiaries and of the state shall be improved with interest at the rate of four per cent (4%) per annum, compounded annually. The board, however, at the end of each fiscal year, beginning with the second fiscal year of the operation of the retirement system may credit to all contributions held in the retirement fund at June thirtieth of the then current fiscal year, such additional interest as it may deem proper in the light of the earnings on the retirement fund during such fiscal year, provided that the total interest credited to contributions during any fiscal year shall not exceed the earnings on the retirement fund during that year; *and provided, further,* that interest at the rate of four per cent (4%) per annum, compounded annually, shall be used in the calculation of benefits under any mortality table adopted by the board, regardless of any additional interest allowed on contributions under this paragraph.

(*c*) In addition to other records and accounts, the board of administration shall keep such records and accounts as shall be necessary to show at any time.

(1) The total accumulated contributions of members.

(2) The total accumulated contributions of retired members less the annuity payments made to such members.

(3) The accumulated contributions of the state held for the benefit of members on account of service rendered as members of the retirement system.

(4) All other accumulated contributions of the state which shall include the amounts available to meet the obligation of the state on account of benefits that have been granted and on account of prior service of members.

(*d*) In addition to rendering the annual report to the governor required by section 6 of this act, the board shall cause to be published annually a financial statement showing an actuarial valuation of the assets and liabilities of the retirement system created by this act and a statement as to the accumulated cash and securities in the retirement fund as certified by the state controller.

SEC. 9. The retirement fund shall be managed as follows:

(*a*) The board of administration shall have exclusive control of the administration and investment of the said fund, subject to the restriction that no investment shall be made except upon the affirmative vote of the director of the department of finance and at least one other member of the board of administration, and subject also to the terms, conditions, limitations and restrictions imposed by the laws of the

State of California upon savings banks in the making of investments by savings banks.

(*b*) The board of administration may deposit cash belonging to the retirement fund in any licensed national bank or banks in this state or in any bank, banks or corporations authorized or licensed to do a banking business and organized under the laws of this state.

(*c*) The state treasurer shall be the custodian of the retirement fund, subject to the exclusive control of the board of administration as to the administration, deposit and investment of said fund. All payments from said fund shall be made by him only upon warrant signed by the president and secretary of the board of administration, subject to the approval of the state controller.

(*d*) Interest on any cash and on any investments constituting a part of the said fund shall be paid into said fund as received.

(*e*) Except as herein provided, no member and no employee of the board of administration shall have any interest, direct or indirect, in the making of any investment, or in the gains or profits accruing therefrom. And no member or employee of the said board directly or indirectly, for himself or as an agent or partner of others, shall borrow any of its funds or deposits or in any manner use the same except to make such current and necessary payments as are authorized by said board; nor shall any member or employee of said board become an indorser or surety or become in any manner an obligor for moneys invested by the board.

SEC. 10. (*a*) The normal rates of contribution of members shall be those adopted by the board of administration and shall be based on sex and age at the nearest birthday at the time of entry into the retirement system. The salary and other scales adopted by the board as provided in section 8 shall form the basis of calculation of normal rates of contribution. The normal rates of contribution fixed by the board shall be such as would provide on the average an annuity at age sixty-five equal to one one-hundred and fortieth of the final average salary of members according to the tables adopted by the board, for each year of service rendered after entering the system. The actual amount of annuity receivable by any member upon retirement shall be the actuarial equivalent of his accumulated contributions, as provided in section 14 (*a*) (1). The rates so adopted shall remain in full force and effect until revised or changed by the board of administration in the manner provided in section 8 of this act.

(*b*) The normal rate of contribution established for the age sixty-four shall be the rate for any member who has attained a greater age before entrance into the retirement system. In like manner the normal rate of contribution established for age sixteen shall be the rate for any member who enters the retirement system at a lesser age.

(*c*) The board of administration shall certify to the head of each office or department the normal rate of contribution for each member provided for in subdivision (*a*) of this section. The head of each office or department shall apply such rate of contribution to so much of the compensation of the member as does not exceed four hundred sixteen dollars and sixty-six cents ($416.66) and shall certify to the state controller on each and every payroll the amount to be contributed, and

shall furnish immediately to the board of administration a copy of each and every such pay roll; and each of said amounts shall be deducted by the state controller and shall be paid into the retirement fund, hereinafter provided for, and shall be credited by the board of administration, together with regular interest, to an individual account of the member for whom the contribution was made. Every member shall be deemed to consent and agree to the contribution made and provided for herein, and shall receipt in full for his salary or compensation, and payment less said contribution shall be full and complete discharge and acquittance of all claims and demands whatsoever for the services rendered by such persons during the period covered by such payment, except his claim to the benefits to which he may be entitled under the provisions of this act.

(*d*) Any member may elect to contribute at rates in excess of those provided for in subdivision (*a*) of this section, for the purpose of providing additional benefits, but the exercise of this privilege by a member shall not place on the state any additional financial obligation. The board of administration, upon application, shall furnish to such member information concerning the nature and amount of additional benefits to be provided by such additional contributions.

(*e*) At the end of each month the board of administration shall determine the aggregate amount of the compensation of all members on which the normal contribution for such month is calculated. There shall be paid to the retirement fund by the state as its contributions to the retirement fund:

(1) A certain percentage of such aggregate amount of compensation each month, to be known as the "normal service and disability contribution." Until the first actuarial valuation of the liabilities of the retirement system as provided in section 8 (*a*), the amount of the normal service and disability contribution shall be three and eight one-hundredths per centum of the compensation of all the members. Subsequent normal service and liability contributions shall be at a rate per centum of the aggregate compensation of all the members, fixed by the board on the basis of the liabilities of the retirement fund as shown by the actuarial valuations on account of the pensions provided for in section 14 (*a*) (1) and (2), and section 16.

(2) The sum of nineteen thousand five hundred dollars monthly until the time provided herein, to be known as the "accrued liability contribution," to provide for the liabilities of the retirement fund on account of prior service as granted by section 14 (*a*) (3) and section 16. The accrued liability contributions shall be discontinued at such time as the accumulations of such contributions, less payments on account of prior service, shall equal the present value as actuarially computed of the liabilities of the fund on account of prior service.

(3) The sum of five thousand two hundred dollars monthly until the time provided herein, to be known as the "minimum service pension liability contribution," to provide for the liabilities of the retirement fund on account of minimum service pensions as granted by section 14 (*b*). The minimum service pension contribution shall be discontinued as soon as the accumulation of such contribution, less payments on account of minimum service pensions, shall equal the present

value as actuarially computed of the liabilities of the fund on account of minimum service pensions.

(4) At the end of each month, the amount, if any, paid during the month to the estates and beneficiaries of deceased members as death benefits in addition to the accumulated contributions of such members.

SEC. 11. The payments of the state into the state employees' retirement fund, as provided in section 10 of this act, are hereby made obligations of the state. The Legislature shall appropriate biennially, such amounts as are necessary to make such payments.

SEC. 12. Should the state service of a member be discontinued except by death or retirement, he shall be paid six months after the date of discontinuance, such part of his accumulated contributions as he shall demand; *provided,* that, if in the opinion of the board of administration, said member is permanently separated from state service by reason of such discontinuance, he shall be paid forthwith all of his accumulated contributions, *and provided, also,* that the board of administration may, in its discretion, withhold for not more than one year after a member last rendered state service all or part of his accumulated normal contributions if after a previous discontinuance of state service he withdrew all or a part of his accumulated normal contributions and failed to redeposit such withdrawn amount in the retirement fund as provided in this section.

Any member may redeposit in the retirement fund, in one sum or in not to exceed six monthly or twelve semimonthly payments, an amount equal to that which he withdrew therefrom at the last termination of his membership. If a member upon reentering the retirement system after a termination of his membership shall not make such redeposit, he shall reenter as a new member without credit for any service and the rate of his contributions for future years shall be the normal rate provided for in subdivision (*a*), section 10, of this act at his age of reentrance; otherwise his rate of contribution for future years shall be the same as his rate prior to the last termination of his membership, and his membership shall be the same as if unbroken by such last termination.

SEC. 13. Retirement of a member for service shall be made by the board of administration as follows:

(*a*). On or after (one year or more from effective date) each member who has attained the age of seventy-five shall be retired forthwith, or on the first day of the calendar month next succeeding that in which the said member shall have attained the age of seventy-five. On or after (five years from the effective date), each member who has attained the age of seventy years shall be retired on the first day of the calendar month next succeeding that in which the said member shall have attained the age of seventy years.

(*b*) Any member in the state service may retire upon written application to the board of administration, stating what time, not less than thirty days subsequent to the filing of such application in case one of the options set forth in section 18 of this act is selected, he desires to be retired; *provided,* that said member, at the time so specified for his retirement, shall have completed twenty years of continuous service as defined in this act and attained the age of sixty years; *and provided, further,* that if at the time of his entrance into the retirement system the member shall have already completed twenty years of continuous service as defined in this act and attained the age of sixty years, he shall complete one additional year of service before retirement.

SEC. 14. (*a*) A member, upon retirement for service, shall receive a retirement allowance which shall consist of:

(1) An annuity which shall be the actuarial equivalent of his accumulated contributions at the time of his retirement; and

(2) A pension, purchased by the contributions of the state, equal to that portion of the annuity purchased by the accumulated normal contributions of the member; and

(3) An additional pension, purchased by the contributions of the state, which shall be equal to one-seventieth of his average annual compensation earnable during the last three years of prior service credited to him multiplied by the number of years of prior service credited to him, except that if a member shall retire before attaining the age of sixty-five years, the additional pension shall be reduced to that amount which the discounted value of the pension as provided for above in this paragraph, deferred to age sixty-five, will purchase at the actual age of retirement.

(*b*) Any member who enters the retirement system on ------------, or who enters after said date and received credit for prior service, and who retires after attaining the age of seventy years, shall receive on account of prior service such additional pension, purchased by the contributions of the state, as will make his total retirement allowance, exclusive of the annuity provided by his accumulated additional contributions, not less than four hundred eighty ($480) dollars per year unless such four hundred eighty ($480) dollars exceeds one-half of his final compensation, in which event his total retirement allowance, exclusive of the annuity provided by his accumulated additional contributions, shall be not less than one-half of his final compensation.

SEC. 15. On and after (one year or more after effective date) retirement of a member for disability shall be made by the board of administration upon medical examination as follows: Any member while in the state service, or within four months after the discontinuance of state service, or while physically or mentally incapacitated for the performance of his duty if such incapacity has been continuous from discontinuance of state service, shall be examined by a physician or surgeon appointed by the board of administration, upon the application of the head of the office or department in which said member is employed, or upon the application of said member or of a person acting in his behalf, stating that said member is physically or mentally incapacitated for the performance of duty and ought to be retired, provided that the said member has had ten or more years of continuous service immediately preceding his retirement. If such medical examination shows, to the satisfaction of the board of administration, that the said member is physically or mentally incapacitated for the performance of duty and ought to be retired, the board of administration shall retire the said member for disability forthwith.

The board of administration shall secure such medical service and advice as may be necessary to carry out the purpose of this section and of section 17 of this act, and shall pay for such medical services and advice such compensation as the board shall deem reasonable.

SEC. 16. (*a*) Upon retirement for disability a member who has attained the age of sixty years shall receive a service retirement allowance as provided in subdivision (*a*), section 14 of this act; otherwise he shall receive a retirement allowance which shall consist of:

(1) An annuity which shall be the actuarial equivalent of his accumulated contributions at the time of his retirement; and if, in the opinion of the board of administration, such disability is not due to intemperance, wilful misconduct or violation of law on the part of the member,

(2) A pension purchased by the contributions of the state which, together with his annuity provided by his accumulated normal contributions, shall make the retirement allowance, exclusive of the annuity provided by his accumulated additional contributions, equal to (1) ninety per cent of one-seventieth of his final compensation multiplied by the number of years of service credited to him, if such retirement allowance exceeds one-fourth of his final compensation; otherwise, (2) ninety per cent of one-seventieth of his final compensation multiplied by the number of years of service which would be creditable to him were his service to continue until attainment by him of age sixty-five, but such retirement allowance shall not exceed one-fourth of such final compensation. In no event, however, shall the pension purchased by the contributions of the state be more than sufficient to make the retirement allowance, exclusive of the annuity provided by his accumulated additional contributions, greater than ninety per cent of the retirement allowance, exclusive of any annuity purchased by accumulated additional contributions, receivable by the member should he retire for service at the lowest age at which he would be eligible for service retirement under the provisions of this act.

(*b*) If, when disability is due to intemperance, wilful misconduct or violation of law, on the part of the member, the annuity to which said member is entitled under subdivision (*a*) of this section be less than two hundred forty ($240) dollars per year, the board of administration, in its discretion, may pay to said member, in one lump sum and in lieu of said annuity, his accumulated contributions.

SEC. 17. (*a*) The board of administration may, at its pleasure, require any disability beneficiary, under age sixty, to undergo medical examination, such examination to be made by a physician or surgeon, appointed by the board of administration, at the place of residence of said beneficiary or other place mutually agreed upon. Upon the basis of such examination the board shall determine whether said disability beneficiary is still incapacitated, physically or mentally, for service in the office or department of the state where he was employed and in the position held by him when retired for disability. If the board of administration shall determine that said beneficiary is not so incapacitated, his retirement allowance shall be canceled forthwith, and he shall be reinstated to the position held by him when retired for disability.

(*b*) Should a disability beneficiary reenter the state service and be eligible for membership in the retirement system in accordance with subdivision (*a*) section 4 of this act, his retirement allowance shall be

canceled and he shall immediately become a member of the retirement system, his rate of contribution for future years being that established for his age at the time of such reentry. His individual account shall be credited with his accumulated contributions less the annuity payments made to him. Such member shall receive credit for prior service in the same manner as if he had never been retired for disability.

(*c*) Should said disability beneficiary, prior to attaining age sixty, engage in a gainful occupation not in the state service or should he reenter the state service and be ineligible for membership in the retirement system in accordance with subdivision (*b*), section 4 of this act, the board of administration shall reduce the amount of his retirement allowance to an amount which, when added to the compensation earned by him in such occupation, shall not exceed the amount of the final compensation on the basis of which his retirement allowance was determined. Should the earning capacity of such beneficiary be further altered, the board may further alter his retirement allowance to an amount which shall not exceed the amount upon which he was originally retired, but which, subject to such limitation, shall equal, when added to the compensation earned by him, the amount of his final compensation on the basis of which his retirement allowance was determined. When said disability beneficiary reaches age sixty, his retirement allowance shall be made equal to the amount upon which he was originally retired, and shall not again be modified for any cause.

(*d*) Should any disability beneficiary under age sixty refuse to submit to medical examination his pension may be discontinued until his withdrawal of such refusal, and should such refusal continue for one year his retirement allowance may be canceled.

(*e*) Should the retirement allowance of any disability beneficiary be canceled for any case other than reentrance of the state service he shall be paid his accumulated contributions, less the annuity payments made to him.

SEC. 18. Until the first payment on account of any retirement allowance is made, the beneficiary may elect to receive the actuarial equivalent at that time of his retirement allowance in a lesser retirement allowance, payable throughout life with the provision that:

Option 1. If he die before he receive in annuity payments provided for in paragraph (1), subdivision (*a*), section 14 and paragraph (1), subdivision (*a*), section 16, of this act, the amount of his accumulated contributions as it was at his retirement, the balance of such accumulated contributions shall be paid to his estate or to such person, having an insurable interest in his life, as he shall nominate by written designation only executed and filed with the board of administration.

Option 2. Upon his death, his lesser retirement allowance shall be continued throughout the life of and paid to such person, having an insurable interest in his life, as he shall nominate by written designation duly executed and filed with the board of administration at the time of his retirement.

Option 3. Upon his death, one-half of his lesser retirement allowance shall be continued throughout the life of and paid to such person, having an insurable interest in his life, as he shall nominate by written designation duly executed and filed with the board of administration at the time of his retirement.

Option 4. Such other benefit or benefits shall be paid either to the beneficiary or to such other person or persons as he shall nominate, provided such other benefit or benefits, together with such lesser retirement allowance, shall be the actuarial equivalent of his retirement allowance, and shall be approved by the board of administration.

SEC. 19. Upon the death of a member while in the state service, there shall be paid to his estate, or to such person having an insurable interest in his life as he shall have nominated by written designation duly executed and filed with the board of administration, his accumulated contributions and if such accumulated contributions are less than five hundred dollars ($500), and, if, in the opinion of the board of administration, such death was not due to intemperance, wilful misconduct or violation of law, on the part of the member, in addition to his accumulated contributions such amount from the state's contributions as shall make the total payable equal to five hundred ($500) dollars.

SEC. 20. No modification of the benefits provided in this act shall be made on account of any amount or amounts payable to a beneficiary, as defined herein, under the provisions of the workmen's compensation insurance and safety laws of California.

SEC. 21. A pension, an annuity or retirement allowance granted under the provisions of this act shall be payable in equal monthly installments but a smaller pro rata amount may be paid for part of a month when the pension, annuity or retirement allowance begins after the first day of the month or ends before the last day of the month, or

SEC. 22. The right of a person to a pension, an annuity or a retirement allowance, to the return of contributions, the pension, annuity or retirement allowance itself, any optional benefit, any other right accrued or accruing to any person under the provisions of this act and the moneys in the fund created under this act shall not be subject to execution, garnishment, attachment, or any other process whatsoever, and shall be unassignable except as in this act specifically provided.

SEC. 23. If it shall be impracticable for the board of administration to determine from the records the length of service, the compensation or the age of any member, the said board may estimate, for the purposes of this act, such length of service, compensation or age.

SEC. 24. No person who has been retired for service or disability and who receives a retirement allowance under the retirement system shall be paid for any service, except as a juror or as an election officer, rendered by him to the state after the date of his retirement.

SEC. 25. If any section, or sections, or part of any section, of this act shall be found to be unconstitutional or invalid, for any reason, the remainder of the act shall not thereby be invalidated, but shall remain in full force and effect.

SEC. 26. All acts and parts of acts in so far as they conflict with this act are hereby repealed.

APPENDIX IV

ACTUARIAL REPORT ON PROPOSED RETIREMENT SYSTEM FOR EMPLOYEES OF STATE OF CALIFORNIA SUBMITTED TO COMMISSION ON PENSIONS OF STATE EMPLOYEES

COLLECTION OF DATA

In order to comply with the request of the Commission that the cost of certain proposed benefits be determined, it was necessary to assemble considerable statistical material bearing on past and present employees of the State of California.

A complete list of present eligible employees in service at the close of 1927 was obtained from the pay roll records filed with the State Controller. An information card was then sent to each employee through the head of his department, which he was requested to complete. Sample of this card is shown on page 40. In all instances where the Civil Service Commission had on file a roster card for the employee, these were compared with the information secured from the employees, so as to assure the accuracy of the statistics as finally assembled.

The period chosen for the investigation of past experience was from January 1, 1923, to December 31, 1927. Roster cards of the Civil Service Commission covering all civil service and temporary authorization employees in active service at any time during this experience period, but who separated from the service for any reason before the end of the period, were pulled from the files of terminated cards. Age data for these employees was not shown on the roster cards, but a thorough search through the records provided this information in approximately 62.5 per cent of the total number of terminations, and in approximately 97 per cent of the number of terminations of civil service employees.

TABULATION

All necessary information from the terminated roster cards and the information cards was coded and punched on Hollerith cards to facilitate the tabulation of the data. A sample of the Hollerith card used is shown on page 41.

All cards for part-time employees, extra help, employees elected or appointed for a fixed term, and employees with less than six months of service were excluded before any tabulations were made.

SALARY SCALES

The rates of salary were tabulated to establish a salary scale, showing the relative salaries at the various attained ages. The data was separated according to the following six arbitrary occupational groups:

1. Male—Clerical and administrative.
2. Male—Skilled labor and mechanics.
3. Male—Unskilled labor.
4. Male—Institutional workers.
5. Female—Clerical and administrative.
6. Female—Institutional workers.

INFORMATION CARD

COMMISSION ON PENSIONS
STATE OF CALIFORNIA

1. NAME ______ Family name ______ Given name or names

Full Time	
Part Time	
Extra Help	

Check one

2. DEPARTMENT Where now employed ______ Position or Occupation

4. SEX

Male	Female

3. DATE OF BIRTH ______ Month ______ Day ______ Year

5. STATUS { Civil Service Rating / Under Temp. Authorization / Exempt From Civil Service

Strike out two

Date First Appointed ______ Month ______ Day ______ Year

6. RECORD OF STATE SERVICE

Dates From	Dates To	Position and Department

7. PERIODS OUT OF STATE SERVICE
Show below any periods since your first appointment when you were out of State service

From Date	To Date

8. SALARY OR WAGES FOR STATE WORK LAST FIVE YEARS

Calendar Year	Total Received for Year	State Whether Monthly or Per Diem Basis
1923		
1924		
1925		
1926		
1927		

NOTE.—If any special explanations are necessary they may be written on back of this card.

I HEREBY CERTIFY, *That the foregoing statements are complete, true and correct to the best of my knowledge and belief.*

[Dated] ______

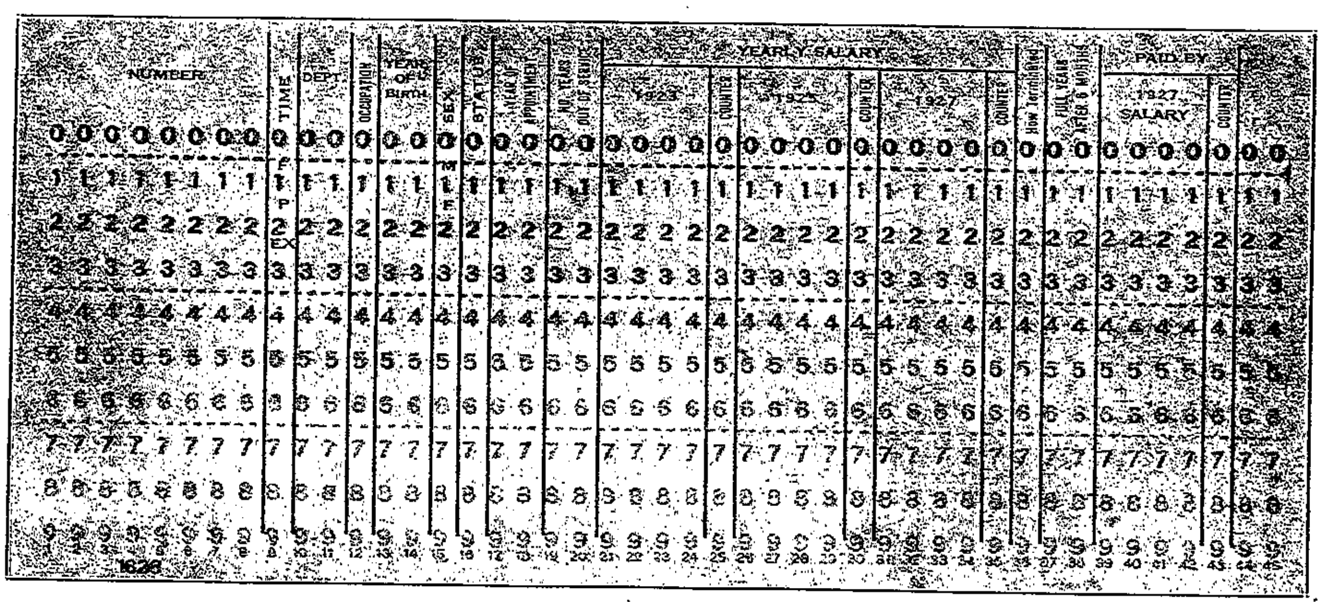
SIGN HERE ______

NOTE.—The purpose of this record is to secure adequate statistical information upon which to base plans for a sound and satisfactory pension plan for state officers and employees. Your answers will be used collectively, and *for the purposes of this Commission only.*

PLEASE EXERCISE GREAT CARE in completing this card. Incorrect or careless statements will seriously affect the accuracy of the entire result. If in doubt as to any answer consult the head of your department or the person from whom you received this card.

If you desire, you may place this card in a sealed envelope, addressed to Pension Commission, marking the envelope with your name, and hand the envelope to the head of your department who will then forward it to the Commission.

DO NOT WRITE IN THIS SPACE



The salaries were also kept separate for years 1923, 1925, and 1927 in order that any trends in rate of salary increase might be observed. The cards for which no age data was available were excluded from this part of the investigation. Average salaries by attained ages were computed and a salary scale derived for each group. It was found that no perceptible difference appeared in the rate of salary increase by age for the various years under observation. The figures for all three years were therefore combined to form one salary scale for each occupational group.

A careful examination of the graphs of the salary scales so computed showed that a combination of groups might well be effected. One combination was made of occupational groups one and two listed above, and another of groups three and four. Salary scales for the resulting four groups were used in the computation of cost figures for the various benefits.

The percentage rates of contribution of employees were also computed using these four salary scales, but it was observed that the resulting rates for the two occupational groups of male employees were so close that in the interests of simplicity they could be combined. A similar situation was observed in the two occupational groups of female employees. Accordingly, another combination was effected, and two salary scales were made, one for all male employees and one for all female employees. It was essential to retain these two groupings because of the uniformly higher mortality which may be expected among male annuitants as compared with female annuitants. The superior longevity anticipated among female employees makes it necessary for them to have greater accumulations at retirement than male employees, in order to provide annuities of like amount, which in turn means higher contribution rate for women than for men. The use of these final salary scales was limited to the computation of percentage rates of contributions of employees. All salary scales used are shown in Table 1.

WITHDRAWAL RATES

A study was next made of the rates of withdrawal of the employees by attained age and length of service. The rates used were confined to those of employees under civil service because the information on these employees was more complete and reliable than on the others, and because they represented a more stable group, whose experience would more nearly approximate that expected under a retirement system.

An analysis of the withdrawals by year of termination showed that the years 1923 and 1927 presented an exceptionally high average withdrawal rate as compared with the years 1924, 1925 and 1926. To include both the years 1923 and 1927 in our investigation would have produced an abnormally high withdrawal rate, and for this reason the year 1923 was excluded from this study. From this four year experience period, "select" and "ultimate" rates of withdrawal were computed. Cards bearing no age data were distributed in appropriate groups according to the distribution of the cards in those groups on which ages were available. "Select" rates were determined for the first three years of service, because the rates of withdrawal in the early years of service were much higher than the withdrawal rates of employees of the same age who had been in the service for a longer period.

No reliable information was available for obtaining the reasons for separation from service and, therefore, it was impossible to determine the death rate or the rate of disability. The withdrawal rate, computed as described above, included not only resignations and dismissals from service, but also deaths and disabilities. In order to adjust for this factor, there was deducted from the gross withdrawal rate the assumed mortality and disability rate, using the standard tables mentioned in the description of the active service table which follows.

It was found desirable to combine the data into two groups for the purposes of computation. The first group included occupational groups 1, 2, and 5, shown above, and the second group included groups 3, 4, and 6.

The final graduated rates of withdrawal used in the construction of the Active Service Tables are shown in Tables 2 and 3.

ACTIVE SERVICE TABLE

In order to compute an active service table it is necessary to have the following rates for employees in active service:

1. Rate of mortality.
2. Rate of disability.
3. Rate of withdrawal.

Only the third item mentioned above was available from the data at our disposal. The rates of mortality for all groups of employees were assumed to be the same as shown by the American Experience Table of Mortality, which is a conservative table long accepted as a standard among life insurance companies and known to follow closely the mortality generally experienced under retirement systems.

The rates of disability were taken from the experience of the City of New York Employees' Retirement Fund. The disability experience on laborers was used for our institutional group (combination of occupational groups 3, 4, and 6) and an interpolated value between the experience of clerks and mechanics was used for our clerical and administrative group (combination of occupational groups 1, 2, and 5). The rates of disability of the employees under a retirement system depend not only upon the particular group covered but upon the administration of the benefit. It is probable that the tables of rates of disability chosen will, with reasonable care in administration, be found to be a close approximation of the experience under the proposed system.

Tables 2 and 3, in addition to showing the rates of withdrawal, show the assumed rates of disability and mortality. Tables 4 and 5 show the Active Service Tables.

CONSTRUCTION OF MONETARY TABLES AND THE VALUATION OF BENEFITS

Commutation columns were prepared for the valuation of each benefit. The rate of interest was assumed to be 4 per cent per annum compounded annually. Mortality of service pensioners was assumed to follow "McClintock's Annuitants' Mortality Tables," using the appropriate tables for males and females. Mortality of disability pensioners was assumed to follow Hunter's Disability Table. Annuity values are shown in Table 6.

Explanations of the construction of the commutation columns and of the formulas used in valuing the benefits would involve considerable mathematical analysis which is felt to be beyond the scope of this report.

OUTLINE OF PROPOSED SYSTEM

These fundamental tables were used to make various experimental calculations which were desired by the Commission in its analysis of different proposals. Final detailed calculations were made in accordance with the proposed system described in the Commission's report. The benefits and provisions of this system may be summarized as follows:

I. General Nature of Proposed System.

1. System is to be on "savings-bank" principle. The actual amount of retirement allowance for future service will be dependent upon the accumulated funds to the credit of the employee at the time of retirement. Contribution rates are figured so that if the present salary scale holds good, and interest at 4 per cent per annum is credited, the retirement allowance at age 65 for future service will be 1/70 of "final salary" for each year of service. "Final salary" is defined as the average salary for the five years prior to service retirement.

2. The first six months of an employee's service shall be ignored.

II. Service Retirement Benefit.

1. Retirement is optional at age 60, provided there is a minimum of twenty years' service, and compulsory at age 70. As regards present employees, any person over 65 years at adoption of system shall not be subject to compulsory retirement, except for disability, until he has served five additional years.

2. Maximum salary considered shall be $5,000 per year. The state will not contribute on any portion of salary above this figure, though employees may contribute on full basis if he desires.

3. Rates of contribution shall be "keyed" to produce an estimated retirement allowance of 1/70 of final salary for each year of service, provided that retirement takes place at age 65. Retirement before or after 65 would produce proportionately smaller or larger percentage.

4. Prior service is to be recognized by a special allowance furnished by the state, applicable upon retirement at or after age 65. This allowance shall be 1/70 of salary for each year of prior service. Salary is to be considered as the average compensation for three years previous to the adoption of the system.

5. No employee now in service shall be subject to compulsory retirement at any time on a retirement allowance less than $40 per month. If the regular provisions of the system yield less than this amount when he becomes subject to compulsory retirement, the state shall make up the difference. Any present employee retiring after age 70 shall receive a minimum of $40 per month.

6. As regards future service, the state will "match" the retirement annuity purchased by the employee's accumulated contributions.

III. Disability Retirement Benefit.

1. Benefit shall not take effect unless employee has had at least ten years of service. Service prior to the adoption of the system will count toward this minimum.

2. Disability benefits shall be entirely independent of Workmen's Compensation benefits.

3. Upon disability, employee shall receive annuity purchased by his own accumulations, plus such an allowance from the state as shall make his total benefit equal to 90 per cent of 1/70 of final salary for each year of service. Final salary is the average salary received for five years prior to disability.

4. If this works out at less than 25 per cent of final salary, employee shall be granted 90 per cent of 1/70 of his final salary for each year of possible service up to age 65, provided that this does not exceed 25 per cent of final salary. In no event, however, shall the disability allowance exceed 90 per cent of the service retirement allowance which the employee could draw, assuming that he retired at his lowest possible retirement age.

IV. Death Benefit.

1. Upon death of any employee before service or disability retirement, the amount of his accumulated contributions will be paid to his beneficiary.

2. If his accumulations are less than $500, the state will contribute an additional amount sufficient to bring them up to that figure.

V. Withdrawal Benefit.

1. When an employee withdraws from the service for any reason except service or disability retirement, his contributions with interest will be refunded to him.

NUMBER AND SALARIES OF ELIGIBLE EMPLOYEES

As has been stated, all cost studies were based on pay rolls as of December 31, 1927. Number and salaries of eligible employees by main occupational groups are as follows:

	Number	*Annual salary*
Male, clerical and administrative and skilled labor	3,462	$7,671,890 00
Male, institutional	1,789	2,439,582 00
Female, clerical and administrative	1,631	2,320,957 00
Female, institutional	671	852,030 00
Totals	7,553	$13,284,459 00

Where an employee receives maintenance or lodging as part of his compensation, it has been included in his salary at the regular rate in use by the State Civil Service Commission. Part-time employees, and those in the service less than six months, are not included.

CONTRIBUTION RATES FOR EMPLOYEES

Table 7 shows the contribution rates of employee-members necessary to produce ½ of a retirement allowance at age 65, equivalent to 1/70 of "final salary" for each year of service. Rates are shown separately for male and female employees and are graded according to age nearest birthday at entry into the system. The rates range from 2.62 per cent of salary for a male employee aged 16 to 7.02 per cent for a female employee aged 64. Any employee entering the system at an age above 64 shall pay the same percentage which applies to age 64. Applying these percentages to all employees in service at the end of 1927, as shown above, a total annual contribution by employees of $542,963 is obtained, which is 4.09 per cent of the pay roll.

ALLOWANCES AT SERVICE RETIREMENT AGES OTHER THAN 65

The system contemplates voluntary service retirement at any age between 60 and 70, provided there has been 20 years' service. Whenever service retirement takes place the employee will receive the "annuity" purchased by his own contributions, plus an equal amount as a "pension" from the state. If he retires before age 65, his estimated retirement allowance for each year of service will be less than 1/70. If he retires after age 65, it will be greater than 1/70. Tables 8 and 9 show the approximate percentages of final average salary to be received by employees entering the system at any age from 20 to 60, and retiring at any age from 60 to 70. These tables are drawn up on the assumption that future salary increases are proportional to the salary scale. The 20-year minimum service requirement includes service prior to the adoption of the system, and the approximate percentage allowance upon retirement is therefore shown for ages at entry into the system as high as 60. To determine the approximate percentage which will be received by a present employee upon his retirement, the percentage from Table 8 or 9 must be obtained corresponding to his age at entry into the system, and to this percentage must be added the amount provided for his prior service allowance.

ESTIMATED COST TO THE STATE

In calculating the estimated cost to the state, no facts were available regarding the probable rate of service retirement after the minimum age of eligibility. Service retirement can take place at any age between 60 and 70, subject to the minimum service requirement, and the cost will vary according to the age actually selected by employees. The assumption has been made that employees will retire, on the average, when they can secure a retirement allowance equal to one-half of their "final" salary, subject always to the compulsory retirement age limit.

Where employees were over 70 years of age at the valuation date, it has been assumed they will retire at the end of two and one-half years.

Cost calculations were made separately for each of the four main occupational groups, because of expected differences in salary scale, disability rates, and withdrawal rates. In assembling the final cost figures, use was made of quinquennial age groups.

Table 10 shows the total present value of all benefits contemplated in the proposed system. These figures do not have any direct bearing on current annual costs. The present value of all future benefits is a very necessary item in drawing up a balance sheet of a system in actual operation, since it then becomes necessary to show as liabilities the total value of all future benefits to present members, and to show as assets the funds in hand plus the present value of the future contributions regularly provided for by the state. These figures are of only theoretical interest in setting up a new system on an actuarial basis, since the annual contributions necessary by the state are figured so that their total present value will be equal to the present value of all future obligations assumed. As a matter of record, however, the figures are made a part of this report.

The important items of Table 10 are the liability for minimum service pension, and for prior service. These represent the total "load" the state will pick up over and above what it will cost to provide the benefits which are applicable to future service.

Table 11 shows the estimated annual payments necessary to defray all costs of the proposed system, based on the eligible employees as of December 31, 1927. The total annual cost of each benefit is also shown as a percentage of the 1927 salaries. Prior service liability is assumed to be liquidated by equal annual payments over a 20-year period, and the cost of minimum service pensions by equal annual payments over a 5-year period.

The annual cost figures show that an annual appropriation of 3.08 per cent of the eligible pay roll should be sufficient to meet all obligations for service and disability allowances applicable to future service. The first-year cost of the death benefit is estimated at 0.35 per cent of the pay roll; as the employees' contributions accumulate, this will rapidly decrease, and should reach an ultimate figure of 0.13 per cent of the pay roll. An additional estimated cost of 1.72 per cent of the 1927 eligible pay roll payable for 20 years, should take care of the prior service obligation, and 0.46 per cent for five years should cover the minimum pension provision. The table shows a total initial annual cost of 5.61 per cent of the eligible pay roll, or $744,473.

In all these calculations of cost to the state, contributions called for from the employees have been omitted. No allowance has been made for the cost of administration, which it is presumed will be borne by the state.

CHART ILLUSTRATING OPERATION OF SYSTEM

Following Table 11 appears a chart showing the amount of disability or service allowance to which an "average" employee entering the service at age 25 would be entitled were he to retire under the proposed plan. The salary assumed to be earned by this "average" employee is shown as the figure corresponding to the salary scale adopted for male employees.

PROVISION FOR QUINQUENNIAL INVESTIGATIONS

Because of the many variable factors entering into any proposed retirement system, it is extremely desirable that an actuarial investigation be made at least once in five years to determine how the actual experience compares with the original estimates of withdrawals, mortality, salary scales, interest rate, etc., so that any necessary adjustments can be made. A provision of this kind is found in all sound retirement systems.

APPRECIATION

In concluding this report I wish to express my appreciation to the members of the Commission for their courteous consideration in all matters from beginning to end of the work, to Miss Lodema Shurtleff, secretary of the Commission, who bore the larger part of the burden of collecting and checking the statistical information regarding present employees, and to Professor A. H. Mowbray, consulting actuary of the Commission for his invaluable and constructive cooperation. I am also grateful to the officers of other retirement systems who have willingly furnished information and suggestions, and especially to Mr. Ralph R. Nelson, secretary-actuary of the San Francisco City Employees Retirement System, who took an active interest in the work as it progressed and who made available the records and experience of his office.

Respectfully submitted.

BARRETT N. COATES,
Actuary.

San Francisco, Cal., November 28, 1928.

COMMISSION ON PENSIONS OF STATE EMPLOYEES,
331 Forum Building,
Sacramento, California.

GENTLEMEN: In accordance with your request I have joined with your actuary, Mr. Coates, in outlining the plans for getting the data for your study of the pension problem, and have conferred with you and him in developing the plan you are proposing. I have also currently checked the data and methods by which the rates of contribution furnished in Mr. Coates' report were determined as well as the data and methods of estimating the cost to the state of setting up the system and providing for the disability benefit and prior service credit. Finally, I have reviewed both the draft of your proposed report and Mr. Coates' actuarial report.

I am pleased to say that I consider the proposed plan actuarially sound and in line with the best progress in pension arrangements, and that in my opinion the contribution rates submitted are such as, on the conditions noted in Mr. Coates' report, will provide the benefits contemplated. I am also of the opinion that the estimates of costs to the state are as accurate as can be made, considering the nature of the problem.

I believe the state may proceed safely in reliance on these estimates. However, I concur in the recommendation that if the plan be adopted there be provision for periodic actuarial review. I deem this an essential provision in all pension plans. It permits timely adjustment for changes in conditions while such adjustment may be made with least difficulty and best effect.

Respectfully submitted.

(Signed) A. H. MOWBRAY,
Consulting Actuary.

Berkeley, Cal., December 8, 1928.

TABLE 1 SALARY SCALES

Age	*In valuing liabilities* — *Male, clerical and skilled labor*	*Male, unskilled labor and institutional*	*Female, clerical*	*Female, institutional*	*In computing percentage rates of contribution of employees* — *Male*	*Female*
20	1,320	1,160	1,090	1,140	1,280	1,090
21	1,418	1,181	1,139	1,160	1,364	1,134
22	1,508	1,200	1,185	1,178	1,440	1,173
23	1,591	1,218	1,226	1,194	1,509	1,209
24	1,668	1,235	1,265	1,208	1,572	1,241
25	1,740	1,250	1,300	1,220	1,630	1,270
26	1,808	1,264	1,332	1,230	1,683	1,296
27	1,873	1,277	1,362	1,239	1,732	1,319
28	1,934	1,289	1,390	1,247	1,778	1,339
29	1,993	1,300	1,416	1,254	1,822	1,358
30	2,050	1,310	1,440	1,260	1,865	1,374
31	2,104	1,319	1,461	1,265	1,907	1,388
32	2,156	1,328	1,482	1,269	1,947	1,401
33	2,204	1,336	1,502	1,273	1,982	1,412
34	2,248	1,343	1,522	1,277	2,013	1,422
35	2,290	1,350	1,540	1,280	2,040	1,431
36	2,320	1,356	1,558	1,282	2,064	1,439
37	2,345	1,363	1,575	1,285	2,085	1,446
38	2,366	1,369	1,591	1,288	2,104	1,452
39	2,384	1,374	1,606	1,291	2,121	1,457
40	2,400	1,380	1,620	1,293	2,136	1,462
41	2,413	1,384	1,633	1,295	2,149	1,466
42	2,425	1,388	1,646	1,296	2,161	1,470
43	2,434	1,392	1,658	1,298	2,172	1,474
44	2,443	1,396	1,669	1,299	2,182	1,478
45	2,450	1,400	1,680	1,300	2,191	1,481
46	2,456	1,404	1,690	1,301	2,199	1,484
47	2,461	1,408	1,700	1,302	2,205	1,487
48	2,465	1,412	1,709	1,303	2,211	1,490
49	2,468	1,416	1,717	1,304	2,216	1,493
50	2,470	1,420	1,725	1,305	2,220	1,496
51	2,473	1,423	1,732	1,306	2,223	1,499
52	2,476	1,426	1,739	1,307	2,226	1,501
53	2,479	1,429	1,745	1,308	2,228	1,503
54	2,482	1,432	1,750	1,309	2,229	1,505
55	2,484	1,435	1,755	1,310	2,230	1,507
56	2,486	1,437	1,759	1,311	2,231	1,509
57	2,488	1,439	1,763	1,312	2,232	1,511
58	2,489	1,441	1,766	1,313	2,233	1,512
59	2,491	1,443	1,768	1,314	2,234	1,514
60	2,493	1,445	1,770	1,315	2,235	1,515
61	2,495	1,446	1,771	1,316	2,236	1,516
62	2,497	1,447	1,772	1,317	2,237	1,517
63	2,498	1,448	1,773	1,318	2,238	1,518
64	2,499	1,449	1,774	1,319	2,239	1,519
65 to 70	2,500	1,450	1,775	1,320	2,240	1,520

TABLE 2 *Male, clerical and skilled labor and female, clerical*

Age	*Rates of withdrawal* — *First year*	*Second year*	*Third year*	*Ultimate*	*Rates of disability*	*Rates of mortality*
17	.1833				.0004	.007688
18	.1796	.1545			.0004	.007727
19	.1758	.1510	.1260		.0005	.007765
20	.1721	.1475	.1228	.0900	.0005	.007805
21	.1684	.1441	.1196	.0874	.0005	.007855
22	.1648	.1406	.1165	.0848	.0006	.007906
23	.1611	.1373	.1133	.0823	.0006	.007958
24	.1576	.1339	.1103	.0797	.0007	.008011
25	.1540	.1306	.1072	.0771	.0008	.008065
26	.1505	.1273	.1042	.0745	.0008	.008130
27	.1470	.1241	.1012	.0719	.0008	.008197
28	.1435	.1208	.0982	.0694	.0009	.008264
29	.1401	.1177	.0953	.0668	.0010	.008345
30	.1367	.1145	.0924	.0642	.0011	.008427
31	.1333	.1114	.0895	.0616	.0011	.008510
32	.1300	.1083	.0867	.0590	.0012	.008607
33	.1267	.1052	.0839	.0565	.0013	.008718
34	.1234	.1022	.0811	.0539	.0014	.008831
35	.1202	.0992	.0784	.0513	.0015	.008946
36	.1170	.0962	.0757	.0487	.0016	.009089
37	.1138	.0933	.0730	.0461	.0017	.009234
38	.1107	.0904	.0704	.0436	.0019	.009408
39	.1076	.0875	.0678	.0410	.0020	.009586
40	.1045	.0847	.0652	.0384	.0022	.009794
41	.1015	.0819	.0627	.0356	.0024	.010008
42	.0984	.0791	.0601	.0329	.0026	.010252
43	.0955	.0764	.0577	.0303	.0028	.010517
44	.0925	.0737	.0552	.0279	.0030	.010829
45	.0896	.0710	.0528	.0255	.0033	.011163
46	.0867	.0684	.0504	.0232	.0037	.011562
47	.0839	.0657	.0481	.0211	.0040	.012000
48	.0810	.0632	.0457	.0190	.0044	.012509
49	.0783	.0606	.0435	.0171	.0049	.013106
50	.0755	.0581	.0412	.0152	.0055	.013781
51	.0728	.0556	.0390	.0134	.0062	.014541
52	.0701	.0532	.0368	.0117	.0070	.015389
53	.0674	.0507	.0346	.0100	.0080	.016333
54	.0648	.0484	.0325	.0084	.0091	.017396
55	.0622	.0460	.0304	.0069	.0105	.018571
56	.0596	.0437	.0283	.0054	.0120	.019885
57	.0571	.0414	.0263	.0040	.0140	.021335
58		.0391	.0243	.0026	.0161	.022936
59			.0223	.0013	.0190	.024720
60				.0000		.026693

TABLE 8 *Male Unskilled Labor and Institutional and Female Institutional*

Age	*Rates of withdrawal* First Year	Second Year	Third Year	Ultimate	*Rates of Disability*	*Rates of Mortality*
17	.3566				.0008	.007688
18	.3453	.2915			.0009	.007727
19	.3344	.2818	.2298		.0010	.007765
20	.3238	.2725	.2212	.1528	.0011	.007805
21	.3136	.2634	.2133	.1465	.0012	.007855
22	.3037	.2547	.2057	.1403	.0013	.007906
23	.2942	.2462	.1983	.1342	.0014	.007958
24	.2850	.2380	.1910	.1283	.0015	.008011
25	.2761	.2300	.1840	.1225	.0016	.008065
26	.2675	.2223	.1772	.1168	.0017	.008130
27	.2592	.2148	.1705	.1113	.0019	.008197
28	.2512	.2076	.1641	.1059	.0020	.008264
29	.2435	.2006	.1578	.1006	.0022	.008345
30	.2361	.1939	.1517	.0954	.0024	.008427
31	.2289	.1874	.1458	.0904	.0026	.008510
32	.2220	.1811	.1401	.0855	.0028	.008607
33	.2153	.1750	.1345	.0807	.0030	.008718
34	.2089	.1691	.1291	.0760	.0033	.008831
35	.2027	.1634	.1239	.0715	.0036	.008946
36	.1967	.1579	.1188	.0671	.0040	.009089
37	.1909	.1526	.1140	.0628	.0044	.009234
38	.1854	.1475	.1092	.0587	.0048	.009408
39	.1800	.1425	.1046	.0547	.0053	.009586
40	.1748	.1377	.1002	.0508	.0058	.009794
41	.1698	.1331	.0959	.0470	.0064	.010008
42	.1649	.1286	.0918	.0434	.0071	.010252
43	.1602	.1242	.0878	.0399	.0078	.010517
44	.1557	.1201	.0839	.0365	.0086	.010829
45	.1513	.1160	.0802	.0333	.0094	.011163
46	.1470	.1121	.0766	.0302	.0104	.011562
47	.1429	.1083	.0731	.0272	.0114	.012000
48	.1389	.1046	.0698	.0243	.0124	.012509
49	.1349	.1010	.0666	.0216	.0135	.013106
50	.1311	.0975	.0635	.0190	.0149	.013781
51	.1274	.0941	.0605	.0165	.0165	.014541
52	.1237	.0908	.0577	.0142	.0184	.015389
53	.1201	.0876	.0549	.0120	.0208	.016333
54	.1166	.0845	.0522	.0099	.0233	.017396
55	.1131	.0814	.0497	.0079	.0264	.018571
56	.1097	.0784	.0473	.0061	.0298	.019885
57	.1063	.0754	.0449	.0044	.0343	.021335
58		.0726	.0426	.0028	.0393	.022936
59			.0405	.0013	.0449	.024720
60				.0000		.026698

TABLE 4

Active service table—Male clerical-skilled labor and female clerical

Age	*Living* First year	Second year	Third year	Ultimate	*Withdrawals* First year	Second year	Third year	Ultimate	Deaths	Disability cases
17	100,000				18,330				769	40
18	89,077	80,861			15,997	12,493			625	32
19	79,569	72,355	67,711		13,988	10,926	8,532		526	34
20	71,297	64,923	60,831	58,619	12,269	9,576	7,470	5,276	458	29
21	64,048	58,435	54,808	52,856	10,786	8,421	6,555	4,620	415	26
22	57,732	52,727	49,526	47,795	9,513	7,413	5,769	4,053	378	29
23	52,163	47,727	44,865	43,335	8,404	6,552	5,083	3,566	345	26
24	47,287	43,313	40,766	39,898	7,452	5,800	4,497	3,140	316	28
25	42,979	39,423	37,136	35,914	6,619	5,148	3,980	2,769	290	29
26	39,175	35,979	33,925	32,826	5,897	4,580	3,535	2,446	267	26
27	35,804	32,929	31,078	30,087	5,262	4,087	3,145	2,163	247	24
28	32,826	30,219	28,546	27,653	4,710	3,650	2,803	1,919	228	25
29	30,173	27,815	26,292	25,481	4,227	3,274	2,505	1,702	213	25
30	27,817	25,664	24,281	23,541	3,803	2,939	2,243	1,511	198	26
31	25,707	23,749	22,481	21,806	3,427	2,646	2,012	1,343	186	24
32	23,825	22,033	20,875	20,253	3,097	2,386	1,810	1,195	174	24
33	22,143	20,494	19,431	18,860	2,805	2,155	1,631	1,066	164	24
34	20,634	19,116	18,133	17,606	2,546	1,953	1,471	949	155	25
35	19,280	17,877	16,967	16,477	2,317	1,773	1,330	845	147	25
36	18,061	16,761	15,917	15,460	2,113	1,613	1,205	753	140	25
37	16,964	15,755	14,969	14,542	1,930	1,470	1,093	670	134	25
38	15,974	14,848	14,113	13,713	1,769	1,342	993	598	129	26
39	15,084	14,025	13,338	12,960	1,624	1,228	904	531	124	26
40	14,279	13,286	12,635	12,279	1,492	1,126	823	472	120	27
41	13,552	12,616	12,001	11,660	1,376	1,034	752	415	117	28
42	12,889	12,008	11,426	11,100	1,268	950	687	365	114	29
43	12,286	11,455	10,904	10,592	1,174	876	629	321	111	30
44	11,735	10,949	10,427	10,130	1,086	806	576	283	110	30
45	11,230	10,487	9,991	9,707	1,007	744	527	248	108	32
46	10,761	10,061	9,591	9,310	933	689	484	216	108	34
47	10,329	9,664	9,219	8,961	867	635	443	189	108	36
48	9,924	9,297	8,874	8,628	804	588	406	164	108	38
49	9,547	8,952	8,552	8,318	747	543	372	142	109	41
50	9,190	8,628	8,248	8,026	694	502	340	122	111	44
51	8,853	8,319	7,960	7,749	644	462	311	104	113	48
52	8,529	8,025	7,684	7,484	598	427	283	88	115	52
53	8,219	7,740	7,418	7,229	554	393	257	72	118	58
54	7,916	7,465	7,159	6,981	513	361	232	59	121	64
55	7,621	7,193	6,906	6,737	474	330	211	46	125	71
56	7,326	6,925	6,653	6,495	436	302	188	35	129	78
57	7,036	6,656	6,402	6,253	401	276	168	25	133	88
58		6,386	6,145	6,007		250	149	16	138	97
59			5,887	5,756			131	7	142	109

TABLE 4—(Continued)

Active service table—Male clerical-skilled labor and female clerical

Age	Living: First year	Living: Second year	Living: Third year	Living: Ultimate	Withdrawals: First year	Withdrawals: Second year	Withdrawals: Third year	Withdrawals: Ultimate	Deaths	Disability cases
60				5,498					147	
61				5,351					154	
62				5,197					163	
63				5,034					171	
64				4,863					179	
65				4,684					188	
66				4,496					196	
67				4,300					205	
68				4,095					213	
69				3,882					220	
70				3,662						

TABLE 5

Active service table—Male, unskilled labor and institutional and female, institutional

Age	Living: First year	Living: Second year	Living: Third year	Living: Ultimate	Withdrawals: First year	Withdrawals: Second year	Withdrawals: Third year	Withdrawals: Ultimate	Deaths	Disability cases
17	100,000				35,660				769	80
18	80,432	63,491			27,773	18,508			491	57
19	65,300	51,965	44,435		21,837	14,643	10,189		345	44
20	53,480	42,891	36,866	33,857	17,316	11,688	8,154	5,173	264	37
21	44,190	35,687	30,821	28,383	13,858	9,400	6,574	4,158	223	34
22	36,807	29,932	25,964	23,968	11,178	7,623	5,341	3,363	190	31
23	30,913	25,290	22,033	20,884	9,095	6,227	4,369	2,736	162	28
24	26,163	21,529	18,827	17,458	7,456	5,125	3,596	2,240	140	26
25	22,304	18,458	16,200	15,052	6,158	4,245	2,980	1,844	121	24
26	19,155	15,930	14,034	13,063	5,123	3,541	2,487	1,526	106	22
27	16,569	13,843	12,232	11,409	4,295	2,973	2,086	1,270	94	22
28	14,427	12,107	10,730	10,023	3,624	2,514	1,761	1,061	83	20
29	12,646	10,655	9,469	8,859	3,079	2,138	1,494	891	74	19
30	11,153	9,433	8,405	7,875	2,633	1,828	1,275	751	66	19
31	9,895	8,899	7,502	7,039	2,265	1,574	1,093	636	60	18
32	8,829	7,520	6,732	6,325	1,960	1,362	943	541	54	18
33	7,923	6,768	6,072	5,712	1,706	1,185	817	461	50	17
34	7,149	6,124	5,504	5,184	1,493	1,036	710	394	46	17
35	6,482	5,569	5,014	4,727	1,314	910	621	338	42	17
36	5,905	5,087	4,589	4,330	1,161	804	545	290	39	17
37	5,404	4,666	4,217	3,984	1,031	713	480	250	37	18
38	4,969	4,299	3,890	3,679	921	634	424	216	35	18
39	4,586	3,977	3,604	3,410	826	567	377	186	33	18
40	4,249	3,692	3,351	3,173	742	509	336	161	31	18
41	3,954	3,440	3,126	2,963	671	458	300	139	30	19
42	3,687	3,218	2,926	2,775	608	414	268	120	28	20
43	3,450	3,015	2,748	2,607	553	374	242	104	27	20
44	3,238	2,834	2,585	2,456	504	340	217	90	27	21
45	3,047	2,671	2,439	2,318	461	310	196	77	26	22
46	2,872	2,523	2,306	2,193	422	283	176	66	25	23
47	2,716	2,387	2,185	2,079	388	258	160	56	25	24
48	2,569	2,264	2,073	1,974	357	237	144	48	25	24
49	2,433	2,148	1,971	1,877	328	217	131	40	25	25
50	2,309	2,040	1,874	1,787	303	199	119	34	25	27
51	2,194	1,940	1,783	1,701	280	183	108	28	25	28
52	2,083	1,846	1,697	1,620	258	168	98	23	25	30
53	1,977	1,755	1,616	1,542	238	154	89	18	25	32
54	1,875	1,666	1,536	1,467	218	141	80	14	26	34
55	1,773	1,580	1,457	1,393	200	129	73	11	26	37
56	1,674	1,493	1,380	1,319	184	117	66	8	26	39
57	1,577	1,407	1,302	1,246	167	106	58	5	27	43
58		1,322	1,223	1,171		96	52	3	27	46
59			1,144	1,095			47	1	27	49

TABLE 5—(Continued)

Active service table—Male, unskilled labor and institutional and female, institutional

Age	Living: First year	Living: Second year	Living: Third year	Living: Ultimate	Withdrawals: First year	Withdrawals: Second year	Withdrawals: Third year	Withdrawals: Ultimate	Deaths	Disability cases
60				1,018					27	
61				991					29	
62				962					30	
63				932					32	
64				900					33	
65				867					35	
66				832					36	
67				796					38	
68				758					39	
69				719					41	
70				678						

TABLE 6

Annuity Values

Age	*Service Retirement**: *Male*	*Service Retirement**: *Female*	*Disability Retirement***: *Age*	*Disability Retirement***
60	10.384	11.705	20	4.7010
61	10.070	11.377	21	4.9957
62	9.754	11.046	22	5.2938
63	9.438	10.714	23	5.5947
64	9.121	10.381	24	5.8914
65	8.804	10.046	25	6.1830
66	8.488	9.711	26	6.4615
67	8.173	9.376	27	6.7178
68	7.859	9.042	28	6.9499
69	7.548	8.709	29	7.1487
70	7.239	8.378	30	7.3043
71	6.934	8.050	31	7.4154
72	6.633	7.724	32	7.4911
73	6.336	7.402	33	7.5338
74	6.045	7.084	34	7.5564
75	5.758	6.770	35	7.5642
76	5.478	6.462	36	7.5641
77	5.205	6.159	37	7.5555
78	4.938	5.863	38	7.5458
79	4.678	5.573	39	7.5257
80	4.426	5.290	40	7.4945
81	4.182	5.015	41	7.4505
82	3.946	4.748	42	7.3997
83	3.718	4.489	43	7.3421
84	3.499	4.238	44	7.2853
85	3.289	3.996	45	7.2201
86	3.088	3.763	46	7.1542
87	2.896	3.539	47	7.0875
88	2.712	3.325	48	7.0111
89	2.538	3.119	49	6.9342
90	2.372	2.923	50	6.8527
91	2.215	2.736	51	6.7696
92	2.067	2.559	52	6.6804
93	1.927	2.390	53	6.5960
94	1.796	2.231	54	6.5147
95	1.673	2.081	55	6.4421
			56	6.3728
			57	6.3079
			58	6.2491
			59	6.1925

*Based on McClintock's Table
**Based on Hunter's Ultimate Table

TABLE 7

RATES OF CONTRIBUTION OF MEMBERS EXPRESSED AS PERCENTAGES OF SALARY

To produce one-half of a retirement allowance equivalent to *one-seventieth* of "final" salary for each year of service.

Retirement Age 65

Age at entry into system	*Male*	*Female*
16	2.62	2.77
17	2.63	2.79
18	2.64	2.81
19	2.66	2.84
20	2.68	2.88
21	2.70	2.92
22	2.73	2.97
23	2.77	3.02
24	2.81	3.08
25	2.85	3.14
26	2.89	3.20
27	2.93	3.26
28	2.98	3.33
29	3.03	3.40
30	3.09	3.47
31	3.14	3.54
32	3.20	3.61
33	3.26	3.69
34	3.32	3.77
35	3.39	3.85
36	3.46	3.94
37	3.53	4.02
38	3.60	4.11
39	3.68	4.20
40	3.75	4.29
41	3.83	4.38
42	3.91	4.48
43	3.99	4.57
44	4.08	4.67
45	4.17	4.77
46	4.26	4.87
47	4.35	4.98
48	4.44	5.08
49	4.53	5.19
50	4.63	5.30
51	4.73	5.41
52	4.83	5.52
53	4.93	5.64
54	5.04	5.75
55	5.14	5.87
56	5.25	5.99
57	5.36	6.11
58	5.47	6.24
59	5.58	6.36
60	5.69	6.49
61	5.80	6.62
62	5.92	6.75
63	6.04	6.89
64	6.16	7.02

TABLE 8

MALES

APPROXIMATE PERCENTAGES OF FINAL AVERAGE SALARY PURCHASED BY ACCUMULATED NORMAL CONTRIBUTIONS OF EMPLOYEES PLUS THE EQUAL ACCUMULATED CONTRIBUTION OF THE STATE

Age at entry into retirement system

	Retirement age										
system	60	61	62	63	64	65	66	67	68	69	70
20	42.6	46.2	50.2	54.5	59.2	64.3	69.9	76.2	83.1	90.7	99.1
21	41.5	45.2	49.0	53.3	57.9	62.9	68.4	74.5	81.3	88.7	97.0
22	40.5	44.1	47.9	52.0	56.5	61.4	66.9	72.9	79.5	86.9	94.9
23	39.5	43.0	46.7	50.8	55.2	60.0	65.3	71.3	77.8	84.9	92.9
24	38.5	41.9	45.5	49.5	53.9	58.6	63.8	69.6	76.0	83.0	90.8
25	37.4	40.8	44.4	48.3	52.5	57.1	62.3	68.0	74.2	81.1	88.8
26	36.4	39.7	43.2	47.0	51.2	55.7	60.8	66.3	72.5	79.2	86.7
27	35.3	38.6	42.0	45.8	49.9	54.3	59.2	64.7	70.7	77.3	84.7
28	34.3	37.5	40.9	44.5	48.5	52.9	57.7	63.0	68.9	75.4	82.7
29	33.3	36.4	39.7	43.3	47.2	51.4	56.2	61.4	67.2	73.6	80.6
30	32.2	35.3	38.5	42.0	45.9	50.0	54.7	59.8	65.4	71.7	78.6
31	31.2	34.1	37.3	40.8	44.5	48.6	53.1	58.1	63.7	69.8	76.5
32	30.1	33.0	36.2	39.5	43.2	47.1	51.6	56.5	61.9	67.9	74.5
33	29.1	31.9	35.0	38.3	41.9	45.7	50.1	54.9	60.2	66.0	72.5
34	28.0	30.8	33.8	37.0	40.5	44.3	48.5	53.3	58.4	64.1	70.5
35	27.0	29.7	32.6	35.8	39.2	42.9	47.0	51.6	56.7	62.3	68.5
36	25.9	28.6	31.4	34.5	37.8	41.4	45.5	50.0	54.9	60.4	66.5
37	24.9	27.5	30.3	33.3	36.5	40.0	44.0	48.4	53.2	58.5	64.5
38	23.8	26.3	29.1	32.0	35.2	38.6	42.5	46.7	51.5	56.7	62.5
39	22.7	25.2	27.9	30.7	33.8	37.1	40.9	45.1	49.7	54.8	60.5
40	21.7	24.1	26.7	29.5	32.5	35.7	39.4	43.5	48.0	53.0	58.5
41	20.6	23.0	25.5	28.2	31.1	34.3	37.9	41.9	46.3	51.1	56.5
42	19.5	21.8	24.3	26.9	29.8	32.9	36.4	40.2	44.5	49.3	54.5
43	18.5	20.7	23.1	25.7	28.5	31.4	34.9	38.6	42.8	47.4	52.5
44	17.4	19.6	21.9	24.4	27.1	30.0	33.3	37.0	41.1	45.5	50.5
45	16.3	18.4	20.7	23.1	25.8	28.6	31.8	35.4	39.3	43.7	48.6
46	15.2	17.3	19.5	21.9	24.4	27.1	30.3	33.8	37.6	41.9	46.6
47	14.1	16.2	18.3	20.6	23.1	25.7	28.8	32.1	35.9	40.0	44.6
48	13.1	15.0	17.1	19.3	21.7	24.3	27.3	30.5	34.2	38.2	42.7
49	12.0	13.9	15.0	18.1	20.4	22.9	25.7	28.9	32.4	36.3	40.7
50	10.9	12.8	14.7	16.8	19.0	21.4	24.2	27.3	30.7	34.5	38.7
51	09.8	11.6	13.5	15.5	17.7	20.0	22.7	25.7	29.0	32.7	36.8
52	08.7	10.5	12.3	14.3	16.3	18.6	21.2	24.1	27.3	30.8	34.8
53	07.7	09.3	11.1	13.0	15.0	17.1	19.7	22.5	25.6	29.0	32.8
54	06.6	08.2	09.9	11.7	13.7	15.7	18.1	20.9	23.9	27.2	30.9
55	05.5	07.1	08.7	10.5	12.3	14.3	16.6	19.2	22.1	25.4	28.9
56	04.4	05.9	07.5	09.2	11.0	12.9	15.1	17.6	20.4	23.5	27.0
57	03.3	04.8	06.3	07.9	09.6	11.4	13.6	16.0	18.7	21.7	25.1
58	02.2	03.6	05.1	06.7	08.3	10.0	12.1	14.4	17.0	19.9	23.1
59	01.1	02.5	03.9	05.4	06.9	08.6	10.6	12.8	15.3	18.1	21.2
60	00.0	01.3	02.7	04.1	05.6	07.1	09.1	11.2	13.6	16.3	19.2

TABLE 9 FEMALES

APPROXIMATE PERCENTAGES OF FINAL AVERAGE SALARY PURCHASED BY ACCUMULATED NORMAL CONTRIBUTIONS OF EMPLOYEES PLUS THE EQUAL ACCUMULATED CONTRIBUTION OF THE STATE

Age at entry into retirement system	*Retirement age*										
system	60	61	62	63	64	65	66	67	68	69	70
20	43.3	46.9	50.7	54.9	59.4	64.3	69.7	75.7	82.3	89.5	97.4
21	42.3	45.8	49.5	53.6	58.1	62.9	68.2	74.0	80.5	87.6	94.4
22	41.2	44.7	48.4	52.4	56.7	61.4	66.7	72.4	78.7	85.7	93.3
23	40.2	43.5	47.2	51.1	55.4	60.0	65.1	70.8	77.0	83.8	91.3
24	39.1	42.4	46.0	49.9	54.0	58.6	63.6	69.2	75.3	81.9	89.3
25	38.0	41.3	44.8	48.6	52.7	57.1	62.1	67.5	73.5	80.1	87.3
26	37.0	40.2	43.6	47.3	51.4	55.7	60.6	65.9	71.8	78.2	85.3
27	35.9	39.1	42.4	46.1	50.0	54.3	59.0	64.3	70.0	76.4	83.3
28	34.9	37.9	41.3	44.8	48.7	52.9	57.5	62.7	68.3	74.5	81.3
29	33.8	36.8	40.1	43.6	47.3	51.4	56.0	61.0	66.6	72.7	79.4
30	32.7	35.7	38.9	42.3	46.0	50.0	54.5	59.4	64.8	70.8	77.4
31	31.7	34.6	37.7	41.0	44.7	48.6	53.0	57.8	63.1	68.9	75.4
32	30.6	33.4	36.5	39.8	43.3	47.1	51.5	56.2	61.4	67.1	73.4
33	29.5	32.3	35.3	38.5	42.0	45.7	49.9	54.5	59.6	65.2	71.4
34	28.4	31.2	34.1	37.3	40.6	44.3	48.4	52.9	57.9	63.4	69.4
35	27.4	30.0	32.9	36.0	39.3	42.9	46.9	51.3	56.2	61.5	67.5
36	26.3	28.9	31.7	34.7	37.9	41.4	45.4	49.7	54.5	59.7	65.5
37	25.2	27.8	30.5	33.5	36.6	40.0	43.9	48.1	52.7	57.9	63.5
38	24.1	26.6	29.3	32.2	35.3	38.6	42.3	46.5	51.0	56.0	61.6
39	23.0	25.5	28.1	30.9	33.9	37.1	40.8	44.9	49.3	54.2	59.6
40	22.0	24.3	26.9	29.6	32.6	35.7	39.3	43.2	47.6	52.4	57.7
41	20.9	23.2	25.7	28.4	31.2	34.3	37.8	41.6	45.9	50.5	55.7
42	19.8	22.1	24.5	27.1	29.9	32.9	36.3	40.0	44.1	48.7	53.7
43	18.7	20.9	23.3	25.8	28.5	31.4	34.7	38.4	42.4	46.9	51.8
44	17.6	19.8	22.1	24.5	27.2	30.0	33.2	36.8	40.7	45.0	49.8
45	16.5	18.6	20.9	23.3	25.8	28.6	31.7	35.2	39.0	43.2	47.9
46	15.4	17.5	19.7	22.0	24.5	27.1	30.2	33.6	37.3	41.4	45.9
47	14.3	16.3	18.5	20.7	23.1	25.7	28.7	32.0	35.6	39.6	44.0
48	13.3	15.2	17.3	19.5	21.8	24.3	27.2	30.4	33.9	37.7	42.0
49	12.1	14.1	16.1	18.2	20.4	22.9	25.7	28.8	32.2	35.9	40.1
50	11.1	12.9	14.9	16.9	19.1	21.4	24.1	27.1	30.5	34.1	38.2
41	10.0	11.7	13.6	15.6	17.7	20.0	22.6	25.5	28.8	32.3	36.2
42	8.9	10.6	12.4	14.4	16.4	18.6	21.1	23.9	27.0	30.5	34.3
53	7.7	9.4	11.2	13.1	15.0	17.1	19.6	22.3	25.4	28.7	32.4
54	6.7	8.3	10.0	11.8	13.7	15.7	18.1	20.7	23.7	26.9	30.5
55	5.5	7.1	8.8	10.5	12.3	14.3	16.6	19.1	22.0	25.1	28.5
56	4.5	6.0	7.6	9.3	11.0	12.9	15.1	17.5	20.3	23.3	26.6
57	3.3	4.8	6.4	8.0	9.7	11.4	13.6	15.9	18.6	21.5	24.7
58	2.2	3.7	5.1	6.7	8.3	10.0	12.1	14.3	16.9	19.7	22.8
59	1.1	2.5	3.9	5.4	6.9	8.6	10.6	12.7	15.2	17.9	20.9
60	0.0	1.3	2.7	4.1	5.6	7.1	9.0	11.1	13.5	16.1	18.9

TABLE 10

TOTAL PRESENT VALUE OF BENEFITS UNDER PROPOSED SYSTEM

	Males		*Females*		
	Clerical	*Institutional*	*Clerical*	*Institutional*	*Total*
Present value future contributions required of state to match service retirement benefit (future service)	$1,770,198	$439,155	$464,269	$150,705	$2,824,307
Disability, past and future service	469,010	219,964	133,748	106,362	929,084
Deduct: contributions of employees to be applied	154,772	71,249	54,156	36,177	316,354
Net present value of disability benefits	$314,238	$148,715	$79,592	$70,185	$612,730
Present value of death benefit	73,850	68,930	33,885	21,004	197,669
Minimum service pension ($40 per month)	105,151	153,119	10,839	12,031	281,140
Present value retirement benefits for prior service	2,003,392	657,064	334,150	230,776	3,225,382
Total present value of benefits for prior and future service	$4,266,829	$1,466,963	$922,735	$484,701	$7,141,228

NOTE: Attention is directed to the fact that the figures in this table are the estimated present values of all costs to be incurred during the entire future service of all present employees eligible to the system, as well as the cost of the proposed prior service allowance.

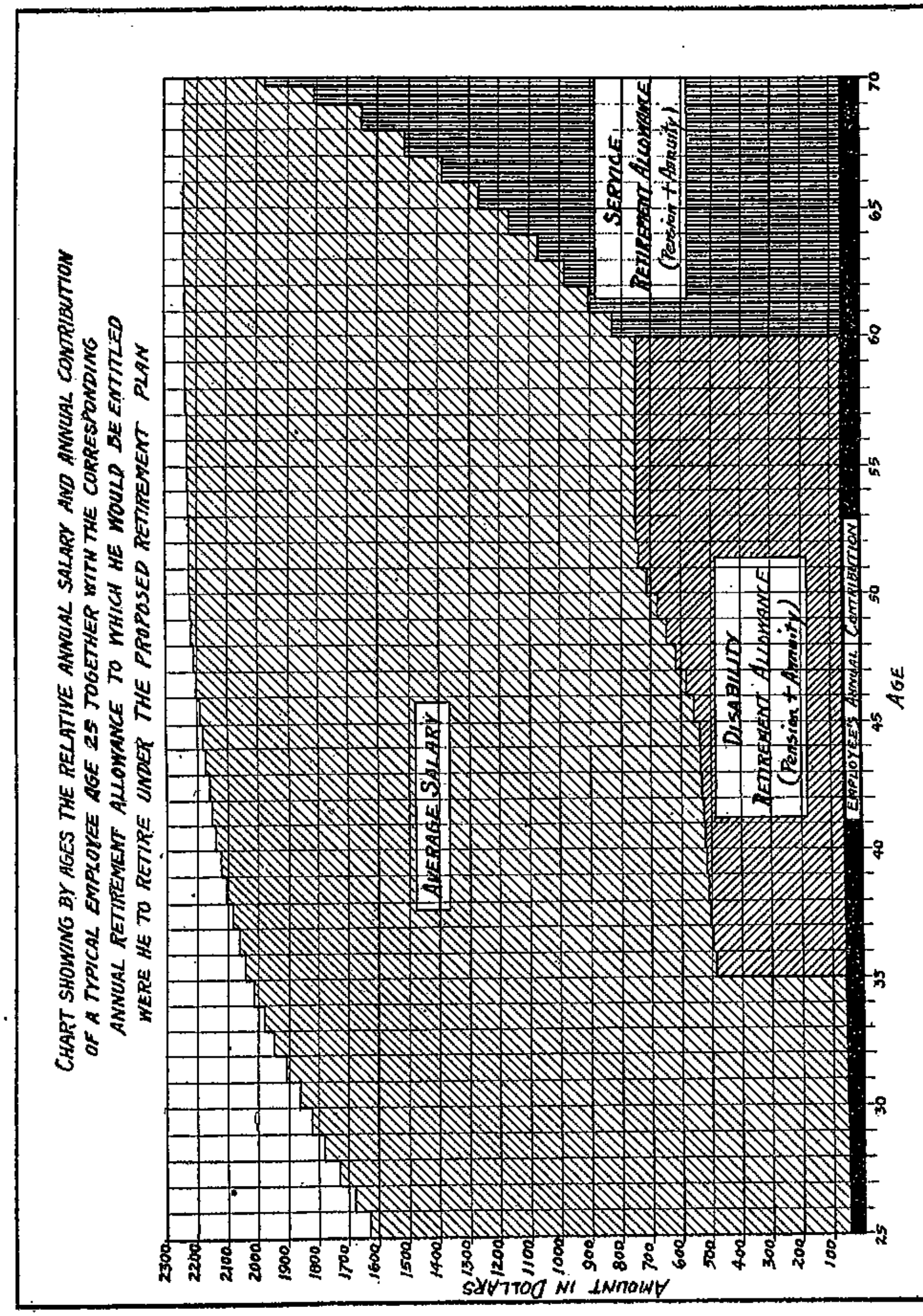
TABLE 11

ESTIMATED ANNUAL PAYMENTS REQUIRED OF STATE TO DEFRAY COSTS OF PROPOSED SYSTEM AS APPLIED TO PRESENT EMPLOYEES

	Males		*Females*			
	Clerical	*Inst.*	*Clerical*	*Inst.*	*Total*	Percentage of 1927 Salaries
Service retirement benefit (future service)	$195,355	$62,811	$46,533	$19,298	$323,997	2.44
Disability retirement benefit	57,809	33,972	14,723	15,877	122,381	
Deduct, contributions of employees to be applied	16,835	9,795	5,600	4,833	37,063	
Net for disability benefit	$40,974	$24,177	$9,123	$11,044	$85,318	0.64
Death benefit (first year cost)	21,100	13,786	7,530	3,819	46,235	0.35
Minimum service pension (sinking fund for 5 years)	22,711	33,072	2,341	2,599	60,723	0.46
Service retirement benefit prior service (sinking fund for 20 years)	141,742	46,488	23,642	16,328	228,200	1.72
Total annual payments required (first year basis)	$421,882	$180,334	$89,169	$53,088	$744,473	5.61

Occupational groups combined as follows:

Male clerical (cler.) includes clerical, administrative, skilled labor and mechanics.
Male institutional (inst.) includes unskilled labor and institutional workers.
Female clerical (cler.) includes clerical and administrative.
Female institutional (inst.) includes institutional workers only.



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